THE American Lumberman

BUILDING PRODUCTS MERCHANDISER

UNIVERSITY OF MICHIGAN
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1952 DEALER PRODUCTS FILE

APRIL 7, 1952

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Your year around BUYING and SELLING guide

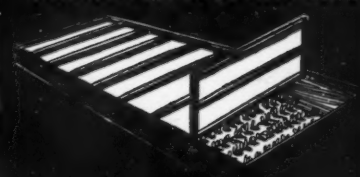
Warp's Window Materials

Increase Your Profits - Give Better Service

Poultry House Windows

Porch Enclosures and Covering Screen Doors

Hot Beds & Greenhouses



Genuine Extra Heavy

FLEX-O-GLASS

GUARANTEED 2 FULL YEARS

Most Highly Approved by Leading Authorities

THE LEADING WINDOW MATERIAL

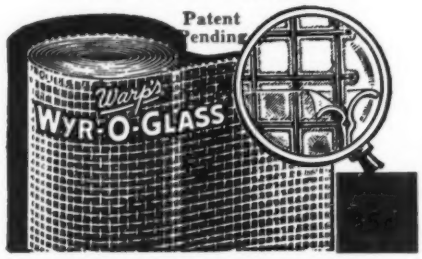
- **Lets Thru More Healthful Ultra-Violet Rays** than other cloth Substitutes (Clear across the Spectrum) as proved in various **Authentic** Tests, and Holds in Heat. Cheaper Than Glass.
- **Absolutely Waterproof—Unbreakable.** Has 124 strong, **preshrunk** Threads per Square Inch. Impregnated with extra high M. P. Composition that will not run, discolor or melt in a Window.
  Extra Heavy—Extra Durable.

Warp's

WYR-O-GLASS

Wire Base Glass Substitute

Extremely Tough and Very Transparent



A WIRE BASE PLASTIC GLASS

- **Tough Galvanized ¼ in. mesh Wire Base.** Drawn Tough and Thin to admit more light.
- **Every Joint and Wire imbedded** in a cushion plastic, before final Transparent coating is applied, for double reinforcing and to eliminate air pockets.
- **Plastic Glass applied to both sides,** sealing wires inside. **Everything fused** into one.
- **Solid Weatherproof Sheet.** No cheap rosin or glue to discolor or decompose and—no air pockets to trap moisture in Warp's Wyr-O-Glass.

Warp's

GLASS-O-NET

Mesh Base Glass Substitute

Used Where Transparency Is Important

A PLASTIC GLASS COVERED NETTING

- **Made on ¼ inch mesh Waterproofed Cords.** Extra strong. Dyed Light Fast Green.
- **Every Cord imbedded in Cushion Plastic** to eliminate air pockets where greatest strain occurs.
- **Plastic glass applied over Cushion and cords** to seal everything together into one solid weatherproof sheet.
- **Very Transparent,** High Ultra-Violet Ray transmission. Can be washed with Soap and Water.

Warp's

WINDOW-FABRIC

Ordinarily Lasts One Season

The Biggest Seller in the Low Price Field

PLAIN WAXED CLOTH

Over 80 threads per Square Inch. Impregnated with light stable, high melting point wax. Lets through Sun's Ultra-Violet Rays. Holds in heat—cheaper than glass.

Warp's

PLASTIGLASS

All Plastic Window Material

Rugged, Neat and Attractive

PLASTIC CORDS IN PLASTIC GLASS

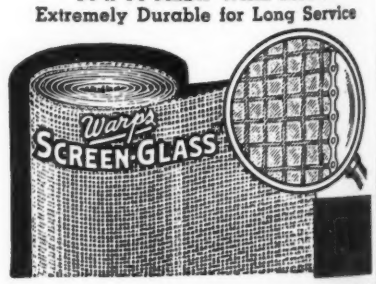
Rugged transparent plastic strand base, that has exceptional strength. Every strand imbedded into another cushion plastic for extra durability. Plastic glass then applied to seal everything into an all plastic, transparent weatherproof sheet. Lasts for years.

Warp's

SCREEN-GLASS

14 x 14 MESH WIRE BASE

Extremely Durable for Long Service



THE BEST IT IS POSSIBLE TO MAKE

Galvanized wire screen cloth imbedded in exceptionally clear, waterproof plastic which transmits and diffuses the sun's Ultra-Violet rays. Holds in heat. Shatterproof, unbreakable and airtight. As flexible as window screen. Cut with shears and tack up. Ship. wt. 3 oz. per sq. ft.

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CHICAGO, ILL.

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American Lumberman

& BUILDING PRODUCTS MERCHANDISER

OUR PLATFORM

1—Organization of an integrated and articulate construction industry which will provide more and better building products to consumers at lower real costs with fair wages and profits to all who serve in the industry. 2—Coordination of all production, marketing, research and professional activities concerned with the development, sale, and delivery to the consumer of building products—including the functions of the manufacturer, wholesaler, retailer, architect, realtor, contractor, mechanic, financier, association official and public servant. 3—Identification of the building products merchant as a central headquarters for the industry's consumer selling activities in the local community. 4—Perpetuation of the American ideal of a free people as the basis of a more abundant and meaningful life for all. 5—Informative, educational and merchandising-minded journalism and service toward these ends. The Editors.

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Nickey Bros., Inc. 98
The Ozark Oak Flooring Co.... 398
Scotch Lumber Co., Inc. 65
W. T. Smith Lumber Co. 400
Southern Lbr. Co. 83
Southern Pine Lumber Co. 71
Urania Lumber Co. 402
Veach-May-Wilson, Inc. 397
J. W. Wells Lbr. Co. 98
Wood-Mosaic Co., Inc. 75-90
Woodard Walker Bowen, Inc... 94
Yawkey-Bissell Hardwood Flooring Co. 403

FLOORING—pecan

E. L. Bruce Co. 378
Miller & Co., Inc. 395
Mobile River Saw Mill Co., Inc. 404

FLOORING—pine

Dargan Lbr. Mfg. Co. 89
Lightsey Bros. 89
W. M. McGowin Lbr. Co. 84
Scotch Lumber Co., Inc. 65
W. T. Smith Lumber Co. 400

FLOORING—pine, end-matched

Belcher Lumber Sales Co. 93
Dierks Lumber and Coal Co..... 82
Lightsey Brothers 89
Louisiana Cypress Lumber Co., Inc. 92

FLOORING—prefinished

E. L. Bruce Co. 378
D. L. Fair Lumber Co. 383

FLOOR TILE—asphalt

Kentile, Inc. 385
Mastic Tile Corp. of America... 391

FRAMES—door, steel

The American Welding & Mfg. Co. 234
Fenestra Building Products..201-203
The Steelcraft Mfg. Co. 212-213
Truscon Steel Co. 181-193

FRAMES—window and door, wood

Biles-Coleman Lbr. Co. 242
Kinzua Pine Mills Co. 41
Pacific Mutual Door Co. 250
Pack River Sales Co. 40

FRAMES—window, steel

The Steelcraft Mfg. Co. 212-213

FRAMES—window, wood

The Malta Mfg. Co. 199

GARAGE DOOR OPERATORS—automatic

Calder Mfg. Co. 511
The Howell Mfg. Co. 511
Wagner Mfg. Co. 513

GARAGE DOORS—overhead type, aluminum

Calder Mfg. Co. 511

GARAGE DOORS—overhead type, steel

Strand Garage Door Div. Det. Steel Products Co. 506-507

GARAGE DOORS—overhead type, wood

Calder Mfg. Co. 511
Carr, Adams & Collier Co. 149
Fiddes-Moore & Co. 113
Fir Door Institute 509
Frantz Mfg. Co. 513
United Products Co. 514
Wagner Mfg. Co. 513

GARBAGE RECEPTACLES

The Donley Bros. Co. 137
Leigh Bldg. Products Div., Air Control Products, Inc. 121

GARDEN TOOL BRACKETS

Reflector-Hardware Corp. 594

GATES—steel folding

The Stewart Iron Works Co., Inc. 117

GLASS BLOCK

American Structural Products Co. 323
Pittsburgh Corning Corp. 325

GLASS CUTTERS

The Fletcher-Terry Co. 342
Red Devil Tools 8
The Ridgely Trimmer Co. 270

GLASS CUTTING BOARDS

Red Devil Tools 8

GLASS CUTTING MACHINES

The Fletcher-Terry Co. 342

GLASS—double pane

Libbey-Owens-Ford Glass Co. 333-336
Pittsburgh Plate Glass Co. 155

GLASS—plate

Libbey-Owens-Ford Glass Co. 333-336
Pittsburgh Plate Glass Co....155-320

GLASS—structural

Libbey-Owens-Ford Glass Co. 333-336

GLASS—window

Libbey-Owens-Ford Glass Co..333-336
Pittsburgh Plate Glass Co. 155

GLAZING COMPOUNDS

Armstrong Co. 342
Macklanburg-Duncan Co. 326-327
Ira Parker & Sons Co. 341
Pecora Paint Co. 328
Plastic Products Co. 338

GLAZING—plastic

Arvey Corp. 231
Plastic Products Co. 338
The Richkraft Co. 411
Sol-O-Lite Mfg. Co. 339
Warp Bros. 2

GLAZING TOOLS

The Fletcher-Terry Co. 342
Red Devil Tools 8

GLUES, SEALERS, BLEACHES

Aetna Plywood & Veneer Co.... 105

GRAIN BINS

Illinois Wire & Mfg. Co. 552

GRILLES—door

Ajax Hardware Mfg. Corp. 311
Harvard Metal Products, Inc.... 141
Huntington Industries 130

GUARDS—door, window

Ajax Hardware Mfg. Corp. 311
Harvard Metal Products, Inc.... 141
Huntington Industries 130
The Stanley Works 283
The Stewart Iron Works Co., Inc. 117

GUTTERS & DOWNSPOUTS—aluminum

Reynolds Metals Co. 125-126

HAMMERS

Walter E. Selck & Co. 571

HANDLES—mop and broom

Belcher Lumber Sales Co. 93

HANGERS—joist

Cleveland Steel Specialty Co. Inc. 144
Copco Steel & Engineering Co. 208-209
The Donley Bros. Co. 140
Gabriel Steel Co. 142
Harvard Metal Products, Inc.... 141
Hosking Paper & Supply 430
The Ideal Hanger Co. 130

HARDBOARD

Aetna Plywood & Veneer Co.... 105
The Celotex Corp. 346
Insulite Div. Minn. & Ontario Paper Co. 360-361
Masonite Corp. 359
Oregon Lumber Co. 354
Plywood & Door Northern Corp. 372
Simpson Logging Co. 355
United States Plywood Corp.... 367

HARDBOARD—prefinished

Armstrong Cork Co. 353
East Coast Tilebord Corp. 363
Marsh Wall Products, Inc. 357
Prestile Mfg. Co. 372
Roxdale Bldg. Products Corp... 369
United States Plywood Corp.... 367

HARDWARE—builders

Ajax Hardware Mfg. Corp. 311
P&F Corbin Div. The American Hardware Corp. 300-301
Gensco Tool Div. General Steel Warehouse Co., Inc. 314
Grant Pulley & Hdwe. Co. 294
Griffin Mfg. Co. 302
Ideal Brass Works, Inc. 314
Lockwood Hardware Mfg. Co... 287
Jay G. McKenna, Inc. 288-289
National Lock Co. 281
Sargent and Co. 305
The Stanley Works 282

HARDWARE—cabinet

Acorn Mfg. Co. 308
Ajax Hardware Mfg. Corp. 311
Akron Hardware Mfg. Corp. 313
American Cabinet Hdwe. Corp.. 297
Corbin Cabinet Lock Div. The American Hardware Corp. 278
Laboratory Equipment Corp. 308
National Lock Co. 281
Washington Steel Products, Inc. 316

HARDWARE—casement window

H. S. Getty & Co., Inc. 285

HARDWARE—closet

Knape & Vogt Mfg. Co. 304
Leigh Bldg. Products Div., Air Control Products, Inc. 121

HARDWARE—sliding door

The American Welding & Mfg. Co. 234
EZ-Way Sales, Inc. 248
Grant Pulley & Hdwe. Co. 294
Jay G. McKenna, Inc. 288-289
Metal Products Corp. 316
The Stanley Works 283

HARDWARE—storm sash & screen

Ideal Brass Works, Inc. 314
Ludwig Mfg. Co., Inc. 314

HEATERS—electric

Nutone, Inc. 7

HINGES

Acorn Mfg. Co. 308
Ajax Hardware Mfg. Corp. 311
Akron Hardware Mfg. Corp. 313
American Cabinet Hardware Corp. 297
P. & F. Corbin Div. American Hardware Corp. 300-301
Gensco Tool Div. General Steel Hardware Co., Inc. 314
H. S. Getty & Co., Inc. 285
Griffin Mfg. Co. 302
C. Hager & Sons Hinge Mfg. Co. 299
Ideal Brass Works, Inc. 314
National Lock Co. 281
Sargent and Co. 305
Soss Mfg. Co. 307

INCINERATORS—garbage

The Donley Bros. Co. 471-481

INSULATING LATH

The Celotex Corp. 346
Insulite Div. Minn. & Ontario Paper Co. 360-361
National Gypsum Co. 376
Simpson Logging Co. 61

INSULATING PLANK

Armstrong Cork Co. 353
The Celotex Corp. 346
Insulite Div. Minn. & Ontario Paper Co. 360-361
Johns-Manville Corp. 351
National Gypsum Co. 376
Simpson Logging Co. 61
Wood Conversion Co. 377

INSULATING SIDING

The Celotex Corp. 346

INSULATION—batt

The Philip Carey Mfg. Co. 441
The Celotex Corp. 346
Insulite Div. Minn. & Ontario Paper Co. 360-361
Johns-Manville Corp. 450
National Gypsum Co. 376
Owens-Corning Fiberglas Corp.. 437

INSULATION—blanket
The Celotex Corp. 346
Insulite Div. Minn. & Ontario Paper Co. 360-361
Johns-Manville 450
Kimberly-Clark Corp. 443-446
National Gypsum Co. 376
Owens-Corning Fiberglas Corp. 437
Wood Conversion Co. 439

INSULATION—board
The Celotex Corp. 346
Homasote Co. 349
Insulite Div. Minn. & Ontario Paper Co. 360-361
Johns-Manville Corp. 351
National Gypsum Co. 376
Simpson Logging Co. 61
Wood Conversion Co. 377

INSULATION—for edges of concrete floors
The Celotex Corp. 346

INSULATION—glass wool
Insulite Div. Minn. & Ontario Paper Co. 360-361
Owens-Corning Fiberglas Corp. 437

INSULATION—pouring, loose fill
The Celotex Corp. 346
Insulite Div. Minn. & Ontario Paper Co. 360-361
National Gypsum Co. 376
Zonolite Co. 449

INSULATION—reflective
Kimberly-Clark Corp. 443-446
Reynolds Metals Co. 451-452
The Richkraft Co. 411
The Sisalkraft Co. 434

INSULATION—vermiculite
Zonolite Co. 449

INSURANCE
Central Mfrs. Mutual Insurance Co. 591
Indiana Lumbermens Mutual Insurance Co. 591
Lumber Mutual Fire Insurance Co. 591
Lumbermens Mutual Casualty Co. 592
Lumbermens Mutual Insurance Co. 591
Northwestern Mutual Fire Assn. 591
Pennsylvania Lumbermens Mutual Insurance Co. 591

IRON RAILINGS
The Bellkool Co. 141
Harvard Metal Products, Inc. 141
Metal Crafters—Railing Specialists 142
The Stewart Iron Works Co., Inc. 117

IRONERS—electric
Westinghouse Electric Corp. 39

JAMBS—metal
N. S. W. Co. 251

KITCHEN ACCESSORIES
The Autoyre Co. 493
Washington Steel Products, Inc. 316

KITCHEN PLANNING
Better Homes Bureau Westinghouse Electric Corp. ... 39

KNIFE GRINDERS
Powermatic Machine Co. 574

KNIVES—linoleum
The Ridgely Trimmer Co. 270
Walter E. Selck & Co. 571

KNOBS—wood
Waddell Mfg. Co. 310

LADDERS
The W. W. Babcock Co. 318
Howard B. Rich, Inc. 312
The Ridgely Trimmer Co. 270

LAMP POSTS
Liteway Mfg. Corp. 142
The Sawhill Mfg. Co. 144

LANTERNS—copper
Liteway Mfg. Corp. 142
Moe Light, Inc. 3, 4, 5, 6

LANTERNS—ornamental iron
Moe Light, Inc. 3, 4, 5, 6
The Stewart Iron Works Co., Inc. 117

LATCHES
Acorn Mfg. Co. 308
Ideal Brass Works, Inc. 314
Laboratory Equipment Corp. ... 308
Lockwood Hardware Mfg. Co. ... 287
National Lock Co. 281
Russell & Erwin Div., The American Hardware Corp. 303
Sargent and Co. 305

LATH—gypsum
National Gypsum Co. 376

LATH—insulating
Armstrong Cork Co. 353
The Celotex Corp. 346
Insulite Div. Minn. & Ontario Paper Co. 360-361
National Gypsum Co. 376

LATH—metal
The Bostwick Steel Lath Co. ... 530-531
Ceco Steel Products Corp. 177
Inland Steel Products Co. 521-524
National Gypsum Co. 376
Pittsburgh Steel Products Co. ... 519
Truscon Steel Co. 526
Wheeling Corrugating Co. 423

LAWN & GARDEN FURNITURE—wood
The Adelphian Mill 467
The Connor Lumber & Land Co. 465

LAWN—spreaders, rollers
Buch Mfg. Co. 319

LIGHTING—fixtures
Moe Light, Inc. 3, 4, 5, 6

LIGHTING—fluorescent
Better Homes Bureau, Westinghouse Electric Corp. ... 39
Moe Light, Inc. 3, 4, 5, 6

LIGHTING—kitchen
Better Homes Bureau Westinghouse Electric Corp. ... 39

LIME—mason's hydrated, finishing
National Gypsum Co. 376
The Ohio Hydrate & Supply Co. 528

LINOLEUM—linoleum tile
Sloane-Blabon Corp. 393

LINSEED OIL
Spencer Kellogg & Sons, Inc. 273

LINTELS—steel
Copco Steel & Engineering Co. 208-209
Gabriel Steel Co. 142
Kewanee Mfg. Co. 233
The Steelcraft Mfg. Co. 212-213
Truscon Steel Co. 143
Vento Steel Products Co., Inc. 216-217

LOCKS—door
Ajax Hardware Mfg. Corp. 311
P & F Corbin Div., The American Hardware Corp. .. 300-301
Lockwood Hardware Mfg. Co. ... 287
National Lock Co. 281
Russell & Erwin Div., The American Hardware Corp. ... 303
Sargent and Co. 305

LOCKS—sash
Ajax Hardware Mfg. Corp. 311
American Cabinet Hdwe. Corp. .. 297
Lockwood Hardware Mfg. Co. ... 287

LOUVRES—attic ventilating, steel
Ceco Steel Products Corp. 172-177
The Donley Bros. 132
Gregg & Son, Inc. 244
Inland Steel Products Co. 521-524
Leigh Bldg. Products Div., Air Control Products, Inc. 121
Leslie Welding Co. 459
Midget Louver Co. 459

LOUVRES—attic ventilating, wood
Carr, Adams & Collier Co. 149

LUMBER—African mahogany
Reynolds & Manley Lbr. Co. 63

LUMBER—Appalachian hardwoods
Bemis Hardwood Lbr. Co. 67
D. D. Brown 75
Cherry River Boom & Lbr. Co. .. 75
M. E. Crisp Lbr. Co. 75
Christian Lbr. Co. 75
The M. B. Farrin Lbr. Co. 75
Hardwood Corp. of America 67
J. P. Hamer Lbr. Co. 75
McCracken & McCall, Inc. 75
Meadow River Lbr. Co. 75
Mowbray & Robinson Lbr. Co. .. 75
The Mower Lbr. Co. 75
Veach-May-Wilson, Inc. 67
Williams-Brownell, Inc. 67
Wood-Mosaic Co. 75-90

LUMBER—Canadian hardwood
Canadian Forest Products Ltd. . 73

LUMBER—Canadian spruce
Canadian Forest Products Ltd. . 73

LUMBER—cypress, red
Lightsey Bros. 89
Louisiana Cypress Lbr. Co., Inc. . 92
Putnam Lbr. & Export Co. 96
Reynolds & Manley Lbr. Co. 63
Southern Pine Lumber Co. 71
Woodard Walker Bowen, Inc. ... 94

LUMBER—Douglas fir
Joseph A. Adair Lbr. Co. 99
Air-King Mfg. Corp. 73
Alexander Lbr. Co. 99
J. Herbert Bate Co., Inc. 92
British Columbia Forest Products, Ltd. 82
Canadian Forest Products, Ltd. . 73
Curtis Lbr. Co. 99
Duncan Lbr. Co., Inc. 99
W. T. Ferguson Lbr. Co. 90
Fiddes-Moore & Co. 113
Firpine Products Co. 79
Gray Lumber & Shingle Co. 98
The Griswold Lbr. Co. 80
Hill-Behan Lbr. Co. 96
Edward Hines Lbr. Co. 57
C. D. Johnson Lbr. Corp. 69
Karlen-Davis Co. 51
Mauk-Seattle Lbr. Co. 99
Medford Corporation 45
Morrill & Sturgeon Lbr. Co. 99
J. Neils Lbr. Co. 94
North Pacific Lbr. Co. 96
Oregon-American Lbr. Corp. 87
Oregon-Pacific Lbr. Co. 95
Pacific National Lumber Co. 99
Rosboro Lumber Co. 85
Russell & Pugh Lbr. Co. 97
Geo. J. Silbernagel 84
Simpson Logging Co. 61
The Ralph L. Smith Lbr. Co. 92
Tarter-Webster & Johnson, Inc. 87
Twin Harbors Lbr. Co. 96
Veneer Lbr. & Plywood Co. 82
Wales Lbr. Co. 88-99
Wendling-Nathan Co. 59-99
Weyerhaeuser Sales Co. 42-43
Winton Lumber Sales Co. 55

LUMBER—Eastern spruce
The Mower Lbr. Co. 74

LUMBER—end-matched
The Alger-Sullivan Lbr. Co. 99
Dierks Lumber & Coal Co. 82
Weyerhauser Sales Co. 42-43

LUMBER—Engelmann spruce
J. Neils Lumber Co. 94
Pack River Sales Co. 40
Carl E. Soderberg Lbr. Co., Inc. 99
Wales Lbr. Co. 88-99
Western Pine Association 86

LUMBER—fir and larch
Anaconda Copper Mining Co. 98
Gray Lumber & Shingle Co. 98
J. Neils Lumber Co. 94
Pack River Sales Co. 40
Russell & Pugh Lumber Co. 97
Western Pine Association 86
Western Pine Mfg. Co. Ltd. 236

LUMBER—Idaho white pine
Edward Hines Lbr. Co. 57
J. Neils Lumber Co. 94
Pack River Sales Co. 40
Russell & Pugh Lbr. Co. 97
Carl E. Soderberg Lbr. Co., Inc. 99
Twin Harbors Lbr. Co. 96
Wales Lbr. Co. 88-99
Western Pine Association 86

LUMBER—incense cedar
The Ralph L. Smith Lumber Co. 92
Tarter-Webster & Johnson, Inc. 87

LUMBER—northern hardwoods
The Connor Lumber and Land Co. 387
Menominee Indian Mills 80

LUMBER—northern hemlock
The Connor Lumber and Land Co. 387
Menominee Indian Mills 80

LUMBER—northern white pine
The Connor Lumber and Land Co. 387
Menominee Indian Mills 80
Rainy Lake Lbr. Co. Ltd. 82

LUMBER—norway pine
Rainy Lake Lumber Co. Ltd. 82

LUMBER—Philippine mahogany
Wood-Mosaic Co., Inc. 75-90

LUMBER—ponderosa pine

Alexander Lumber Co. 99
Anaconda Copper Mining Co. 98
J. Herbert Bate Co., Inc. 92
Biles-Coleman Lbr. Co. 292
Brooks-Scanlon, Inc. 95
Paul Bunyan Lbr. Co. 94
California Sugar & Western Pine Agency, Inc. 84
W. T. Ferguson Lbr. Co. 90
Fiddes-Moore & Co. 113
Hill-Behan Lbr. Co. 96
Edward Hines Lbr. Co. 57
Firpine Products Co. 79
Gray Lumber & Shingle Co. 98
Kinzua Pine Mills Co. 41
The Madera Co. 88
McCloud Lumber Co. 99
Medford Corporation 45
J. Neils Lbr. Co. 94
Oregon Lbr. Co. 354
Oregon-Pacific Lbr. Co. 95
Pack River Sales Co. 40
Russell & Pugh Lbr. Co. 97
Geo. J. Silbernagel 84
The Ralph L. Smith Lbr. Co. 92
Carl E. Soderberg Lbr. Co., Inc. 99
Tarter-Webster & Johnson, Inc. 87
Twin Harbors Lbr. Co. 96
Wales Lbr. Co. 88-99
Wendling-Nathan Co. 59-99
Western Pine Association 86
Western Pine Mfg. Co. Ltd. 236
West Side Lbr. Co. 91
Winton Lbr. Sales Co. 55

LUMBER—redwood

Arcata Redwood Co. 46
California Redwood Association 46
Coastal Plywood & Timber Co. 46
Hammond Lumber Co. 46
Homes Eureka Lumber Co. 46
Northern Redwood Lumber Co. 46
The Pacific Lumber Co. 46
Rockport Redwood Co. 46
Geo. J. Silbernagel 84
Simpson Logging Co. 61
Union Lumber Co. 85
Wallace Mill & Lbr. Co. 95
Wendling-Nathan Co. 59
Willits Redwood Products Co. 46

LUMBER—Sitka spruce

Joseph A. Adair Lbr. Co. 99
British Columbia Forest Products Ltd. 88
Duncan Lbr. Co., Inc. 99
Karlen-Davis Co., 51
Mauk-Seattle Lbr. Co. 99
Morrill & Sturgeon Lbr. Co. 99
North Pacific Lumber Co. 96
Pacific National Lumber Co. 99

LUMBER—southern hardwood

Angelina Hardwood Sales Co. 94
Anthony Bros. Wood Co. 48
Atlantic Lumber Co. 404
Belcher Lbr. Sales Co. 93
E. L. Bruce Co. 378
Caromiss Lumber Co. 398
Dierks Lbr. & Coal Co. 82
D. L. Fair Lbr. Co. 383
W. T. Ferguson Lbr. Co. 90
Gurdon Lbr. Co. 402
Hill-Behan Lbr. Co. 96
The Hurtsboro Lumber Co. 44
Jeffreys-McElrath Mfg. Co. 90
Edward J. Koza Company 83
Lightsey Brothers 89
Memphis Hardwood Flooring Co. 396
Miller & Co., Inc. 395
Mobile River Saw Mill Co., Inc. 404
Putnam Lbr. & Export Co. 96
Reynolds & Manley Lbr. Co. 63
Sims Lumber Co. 97
W. T. Smith Lumber Co. 400
Southern Pine Lbr. Co. 71
The Urania Lbr. Co., Ltd. 402
J. W. Wells Lbr. Co. 98
Woodard Walker Bowen, Inc. 94

LUMBER—southern pine

The Alger-Sullivan Lbr. Co. 99
Anthony Bros. Wood Co. 48
J. Herbert Bate Co., Inc. 92
Belcher Lbr. Sales Co. 93
J. A. Bentley Lbr. Co. 91
Bradley Lbr. Co. of Arkansas. 53
E. L. Bruce Co. 378
Caromiss Lumber Co. 398
Dargan Lbr. Mfg. Co. 89
Dierks Lbr. & Coal Co. 82
D. L. Fair Lbr. Co. 383
W. T. Ferguson Lbr. Co. 90
Gurdon Lbr. Co. 402
Hurtsboro Lumber Co. 44
Jeffreys-McElrath Mfg. Co. 90
Edward J. Koza Co. 86
Lightsey Brothers 89
W. M. McGowin Lbr. Co. 84
Miller & Co., Inc. 395
Ozan Lbr. Co. 47
Putnam Lbr. & Export Co. 96
Reynolds & Manley Lbr. Co. 63
Scotch Lumber Co., Inc. 65
Sims Lumber Co. 97
W. T. Smith Lumber Co. 400
Southern Lumber Co. 83
Southern Pine Lumber Co. 71
The Urania Lbr. Co., Ltd. 402
J. W. Wells Lbr. Co. 98
Woodard Walker Bowen, Inc. 94

LUMBER—sugar pine

Beaver Lumber Sales Co. 93
California Sugar & Western Pine Agency, Inc. 84
Edward Hines Lbr. Co. 57
Firpine Products Co. 79
McCloud Lumber Co. 99
Medford Corporation 45
The Ralph L. Smith Lbr. Co. 92
Carl E. Soderberg Lbr. Co., Inc. 99
Tarter-Webster & Johnson, Inc. 87
Twin Harbors Lbr. Co. 96
Wendling-Nathan Co. 59-99
West Side Lbr. Co. 91
Winton Lbr. Sales Co. 55

LUMBER—treated

Southern Pine Lumber Co. 71

LUMBER—west coast hemlock

Joseph A. Adair Lbr. Co. 99
British Columbia Forest Products Ltd. 88
Canadian Forest Products, Ltd. 73
Duncan Lbr. Co., Inc. 99
Firpine Products Co. 79
Gray Lumber & Shingle Co. 98
The Griswold Lbr. Co. 80
Karlen-Davis Co. 51
Mauk-Seattle Lbr. Co. 99
Morrill & Sturgeon Lbr. Co. 99
Oregon-American Lbr. Corp. 87
Pacific National Lumber Co. 99
Rosboro Lumber Co. 85
Simpson Logging Co. 61
Twin Harbors Lbr. Co. 96
Weyerhaeuser Sales Co. 42-43

LUMBER—west coast woods

Beaver Lumber Sales Co. 93
Curtis Lumber Co. 99
W. T. Ferguson Lumber Co. 90
Firpine Products Co. 79
Edward J. Koza Co. 86
Twin Harbors Lumber Co. 96

LUMBER—western red cedar

Joseph A. Adair Lbr. Co. 99
Alexander Lumber Co. 99
British Columbia Forest Products Ltd. 88
Duncan Lbr. Co., Inc. 99
Firpine Products Co. 79
Karlen-Davis Co. 51
Mauk-Seattle Lbr. Co. 99
Morrill & Sturgeon Lbr. Co. 99
North Pacific Lumber Co. 96
Oregon-Pacific Lbr. Co. 95
Pacific National Lumber Co. 99
Pack River Sales Co. 40
Russell & Pugh Lbr. Co. 97
Winton Lumber Sales Co. 55

LUMBER—western white spruce

North Pacific Lumber Co. 96
Winton Lumber Sales Co. 55

LUMBER—white fir

McCloud Lumber Co. 99
Medford Corporation 45
North Pacific Lumber Co. 96
Russell & Pugh Lbr. Co. 97
The Ralph L. Smith Lbr. Co. 92
Tarter-Webster & Johnson, Inc. 87
West Side Lbr. Co. 91
Winton Lbr. Sales Co. 55

MANTELS—wood

Carr, Adams & Collier Co. 149
Curtis Companies Service Bureau 156-157
Gregg & Son, Inc. 244
Morgan Co. 195

MASONRY CEMENT

Louisville Cement Co., Inc. 538-539

MASON'S LINE

John H. Graham & Co., Inc. 291

MIRRORS—door

Pittsburgh Plate Glass Co. 320

MOISTURE TESTING INSTRUMENTS

L. R. Bradley & Co. 97

MOULDINGS—metal

The B & T Metals Co. 498
Prestile Mfg. Co. 372
Walter E. Selck & Co. 571
Youngstown Manufacturing, Inc. 123

MOULDINGS—wood
(See "Lumber" under species desired)

MOWERS—lawn, power

Jacobsen Manufacturing Co. 462

NAIL BAGS

Hosking Paper & Supply 430

NAILS

Alan Wood Steel Co. 315
American Steel & Wire Co. 554-555
The Deniston Co. 432
E. G. Building Fasteners Corp. 370
John Hassall, Inc. 312
Reynolds Metals Co. 421-422

NAILS—aluminum

Hosking Paper & Supply 430
Reynolds Metals Co. 421-422

NAILS—lead head

The Deniston Co. 432

NAILS—sheathing

E. G. Building Fasteners Corp. 370
John Hassall, Inc. 312

NAILS—shingle

E. G. Building Fasteners Corp. 370

NAILS, TACKS, STAPLES

American Steel & Wire Co. 554-555
Columbia Steel Co. 554-555
Tennessee Coal, Iron & R. R. Co. 554-555
United States Steel Corp. 554-555

ORNAMENTAL IRONWORK

The Bellkool Co. 141
Harvard Metal Products, Inc. 141
Huntington Industries 130
Metal Crafters—Railing Specialists 142

OVENS—gas, built-in

Chambers Corp. 495

PACKAGE RECEIVERS

The Donley Bros. Co. 136
Gabriel Steel Co. 142
Leigh Bldg. Products Div., Air Control Products Inc. 121

PADLOCKS

Corbin Cabinet Lock Div., The American Hardware Corp. 278

PAINT

Boston Varnish Co. 270
Devoe & Raynolds Co., Inc. 271
The Eagle-Picher Co. 263
The Lowe Bros. Co. 272
National Gypsum Co. 268
The Patterson-Sargent Co. 259
Pittsburgh Plate Glass Co. 261
Sheffield Bronze Paint Corp. 275
The Sherwin-Williams Co. 257-265
Waterlox Div., The Empire Varnish Co. 264

PAINT—aluminum

Sheffield Bronze Paint Corp. 275

PAINT—gold leaf finish

Sheffield Bronze Paint Corp. 275

PAINT—oil enamel

Devoe & Raynolds Co., Inc. 271
Lowe Bros. Co. 272
The Patterson-Sargent Co. 259
The Sherwin-Williams Co. 257-265

PAINT—resin emulsion

Lowe Bros. Co. 272
National Gypsum Co. 268
The Sherwin-Williams Co. 257-265

PAINT—roof

Abesto Mfg. Corp. 80
The Richkraft Co. 411
Sheffield Bronze Paint Corp. 275

PAINT MIXING MACHINES

Red Devil Tools 8

PAINT ROLLER CLEANER

G. N. Coughlan Co. 276

PAINT ROLLERS

Red Devil Tools 8
Thomas Products Co. 266-267
Wooster Brush Co. 254

PALLETS

Evans Products Co. 110
Gurdon Lumber Co. 402
Veach-May-Wilson, Inc. 397

PANELING—Appalachian white pine

Appalachian Hardwoods 75

PANELING—hardwood

Angelina Hardwood Sales Co. 94
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Including a Complete Cyclopedia of Building Terms

HOW TO USE THIS INDEX

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ABUTMENT—The solid portion of a wall or pier which acts as a structural support. **Foundation wall, 62.**

ACCELERATOR—Any material added to gypsum plaster to speed up the natural set. **Details of, 518.**

ACCESS DOOR—A door which opens to seldom-used parts of a building, or to concealed equipment. **Metal, 115.**

ACCESSORY HARDWARE—See Hardware.

ACOUSTICAL MATERIALS—Special plasters, tile, or wallboards made of mineral, wood, or vegetable fibers, cork, etc. Applied to walls and ceilings, they are used to control sound. **Details of, 352; Types, 442; Application, 442; Package selling, 505.**

ACOUSTICAL PLASTER—Finishing plaster with aggregates designed to correct sound reverberation. Vermiculite, perlite, and similar light-weight, porous materials usually make up the aggregates. **Light-weight aggregates, 518; Perlite, 518; Vermiculite, 520.**

ACOUSTICAL TILE—See Acoustical Materials.

ACOUSTICS—The science of sound; ability of the human ear to hear and assimilate sounds in a room or auditorium. **Regulating by use of acoustical materials, 352-518.**

ADHESIVE—Mastic or glue used to hold flooring, roofing, ceiling tile, wall tile, wallboard, etc., in place; where nailing is not desirable or practical. **In wood laminates, 78; In plywoods, 101; In flooring application, 382, 388, 392; Roofing, 412; Ceiling panels, 350; Package selling, 505.**

ADJUSTABLE CELLAR POST—A metal bearing post which may be adapted between floor and joists of any structure for added support. **Details of, 116.**

ADOBE CONSTRUCTION—See Construction, Adobe.

AGGREGATE—Inert material used as a filler in mixing cement. Common aggregates are sand, gravel, pebbles, crushed stone, marble dust, vermiculite, perlite, etc. **Insulating, 442-506.**

AIR CONDITIONING—The simultaneous control of temperature, humidity, movement, and purity of air in a structure. **Package selling of, 510.**

AIR DRIED LUMBER—Dried by exposure to the atmosphere without artificial heat. **Explanation of, 56.**

ALTERATION—In building, any change in exit facilities, structural parts, or mechanical equipment which does not increase the cubic content of the structure. **Package selling of, 505-512.**

ALUMINUM—One of the earth's most abundant metals. Present in all soils and clay, aluminum ore may only be extracted easily and cheaply, however, from bauxite. Because of its light weight, malleability, and stability, aluminum is widely used in the present day manufacture of thousands of products, many of them in the building products field. **As a building material, 120; Structural members, 120; Air ducts, 120; Roofing and siding, 120; Windows, doors, 122; Moulding, 127; Screening, 290.**

ALUMINUM AIR DUCTS—Pipes that carry hot air from the furnace of a building to the outlets, made of aluminum. **Details of, 120.**

ALUMINUM FOIL INSULATION—A thin sheet of bright aluminum foil mounted on either a strong building paper, or on the back of gypsum lath or wallboard as a reflective insulation. Its insulation value is equal to that of ½ inch fiber insulation. See Vapor Barrier, Reflective Insulation. **Details of, 442.**

ALUMINUM MOULDING—Pressed or extruded finishing strips made in a wide variety of patterns for use in building. Typical uses are for installing linoleum, prefinished hardboards, metal, rubber, asphalt, and plastic tiles on walls, ceilings, or kitchen work tables. **Details of, 127, 224.**

ALUMINUM NAILS—Nails made of aluminum for use where a durable, weather and corrosion proof nail is desired. sizes and specifications. See Nails. **Nailing tables, 296, 298; Uses, 428.**

ALUMINUM ROOFING—Roofing material made of aluminum. **Details of, 120; Types, 428; Characteristics, 428; Application, 428.**

ALUMINUM SIDING—Exterior covering material made of aluminum. **Details of, 120; Types, 428; Characteristics, 428; Application, 428.**

ANGLE IRON—L-shaped piece of iron used to support a masonry course over an opening. Dimensions vary according to length of span and load. Also called Lintel. **Sizes of, 115; Uses, 115.**

ANGLE REINFORCING—A wire mesh fabric applied over rock lath or insulation board lath at all inner corners of the Wall and ceiling angles. **Details of, 529; Illustration of, 529.**

ANCHOR BOLTS—Bolts to secure a wooden sill to concrete or masonry floor or wall. **Illustration of, 60.**

ANTI-FRICTION AXLE PULLEY—A pulley for window sash with the axle in roller bearings. **Details of, 146.**

ANTI-FRICTION BOLT—A lock latch-bolt provided with a device to reduce friction as the bolt slides when door is closed. **Details of, 282.**

APPLIANCES—A term applied to electrically or gas driven or actuated home accessories, such as stoves, refrigerators, washers, toasters, etc. **Small, 345; Major, 345.**

APPLICATOR—In building products, a tool with which a material is applied, as a roller paint applicator. **Details of, 260.**

APRON—Material which by shape or use suggests an apron. (a) The horizontal piece of wood trim, plain or moulded, to finish below the stool of a window. (b) A strip, usually of lead, attached to a wall to overlap the flashing and to protect a joint. (c) A piece of board for conducting loose material past an opening. **Window, 146.**

ARCH—Construction of any material so arranged as to support itself by mutual pressure, and also capable of sustaining any superimposed weight. The curved top of any opening. **House cross section, 62; Metal plaster, 529.**

ARCHES, LAMINATED—Strips of wood, nailed or glued together to form an arched rafter. **Details of, 78.**

ARCHES, MASONRY—Curved tops over openings of brick, stone, masonry, blocks, etc. See Masonry, **533.**

ARCHES, METAL—Ready-formed plastering arches for doorways and other arched openings. Eliminates two difficult operations, the construction of curved wooden forms, and the forming of corner bead around those curves. Made for standard partition framing. **Details of, 529.**

ARCHES, PLASTER—Formed by metal arches and plaster thereon. **House cross-section, 62; Details, 529.**

AREAWAY—An open subsurface space adjacent to a building to admit light or air. Excavations around basement windows that are below or partially below grade. **Illustration of, 62; Metal, 115.**

AREAWAY WALLS—Walls supporting earth around areaways. Also called window-walls. Commonly made of steel, concrete, concrete locks, brick, or stone. **House cross-section, 62; Metal, 115.**

ASBESTOS—A mineral remarkable for its ability to resist heat and attack by acids. It is fabricated into a wide variety of building products. **Cement, 362; Shingles and siding, 412, 414, 425.**

ASBESTOS CEMENT—A combination of asbestos fiber and cement, most commonly compressed under high pressures into compact, durable panels. **Details of, 358; Sizes, 358; Uses, 358; Application, 358, 362; Shingles, 412, 414; Siding, 425.**

ASBESTOS PLASTER—A plastering material made of asbestos and other materials, and used to cover pipes as an insulator.

ASBESTOS ROOFING—Roofing made of asbestos and cement. Obtainable either in rolls or in the form of shingles. Asbestos roofing is non-combustible. **Types of, 412; Characteristics, 412; Sizes, 414; Application, 414.**

ASBESTOS SHEATHING—A building material used for sheeting. Fireproof and high in insulating quality, asbestos sheeting is supplied in standard size panels. **Details of, 358, 362.**

ASBESTOS SHINGLES—Shingles made of asbestos and cement. **Types of, 412; Characteristics, 412; Application, 414.**

ASH DUMP—Small cast iron frame with one or two counterbalanced iron leaves used on the floor of a fireplace through which ashes may be disposed of to the ash pit in the base of the chimney. **Illustration of, 62; Details of, 115, 482.**

ASH PIT DOOR—A small cast iron or pressed steel door with frame, built in the base of a fireplace (ash pit) through which ashes may be removed. Also called "clean-out door." **Details of, 115.**

ASPHALT—A residue from evaporated petroleum. It is insoluble in water. Widely used in building for waterproofing, roof covering of many types, exterior wall coverings, flooring, tile, etc. **Covering of insulating board sheathing, 350; Under parquet flooring, 384; Tile, 390; Roofing, 408-410; Cement, 412; Roof coating, 412.**

ASPHALT BRICK SIDING—See Siding, Asphalt.

ASPHALT PAINT—Made of asphalt and a thinning material used for painting asphalt roofing. **Details of, 412.**

ASPHALT ROLL ROOFING—Same as asphalt shingles except that it is supplied in rolls instead of smaller shingle units. **Types, 408; Application, 410.**

ASPHALT ROOFING—Roofing material made of a mineral product called bitumen, and applied by heating and spreading over layers of felt which is then covered with gravel, or with sand and Portland cement. **Details of, 406; Pitch requirements, 408; Types of, 408; Application, 408; Package selling, 505.**

ASPHALT SHINGLES—Composition shingles made of asphalt, felt, and a granular topping. **Types of, 408; Application, 410.**

ASPHALT TILE—A hard, durable, tile used for floor covering. It is manufactured principally in 9"x9" squares, and in a wide variety of patterns and colors. **Details of, 388; Composition and manufacture, 388; Characteristics, 388; Sizes, 388; Colors, 388; Application of 388, 390; Package selling, 505.**

ASTRAGAL—Moulding attached to one of a pair of swinging doors against which the other door strikes. Also a small semi-circular moulding or bead encircling a column or post below the capital. See Moulding.

ATTIC—The open space between ceiling joists and roof rafters. **Framing for unfinished attic, 54; Illustration of, 68; Ventilators, 116; Insulation, 447; Ventilating systems, 460.**

ATTIC FRAMES AND SASH—Especially designed windows designed to admit light to attics. **Sizes and specifications, 154.**

ATTIC LOUVRES—To ventilate attics. See Louvres.

ATTIC STAIRWAYS—A stairway leading to an attic. May be either a permanent part of the building or a unit, disappearing type that folds into the stair well when not in use.

ATTIC VENTILATORS—In home building usually attic louvres. Also mechanical devices to force ventilation by means of power-driven fans or by wind driven devices. See Ventilators. **Types, 116; Systems, 460.**

AUTOMATIC HEAT—An installation where it is not necessary to attend the heating system by hand. Fuel is fed to the combustion chamber mechanically, as in oil burners, stokers, and gas burners. Temperatures and plant operation are controlled by thermostats. **Details of systems, 453-458.**

AXLE PULLEY—Same as Frame Pulley.

BACK BAND—Moulding used on the side of a door or window casing for ornamentation, or to increase the width of the trim. **Illustration of, 164.**

BACKFILL—Replacing earth around foundation walls. **House cross-section, 62.**

BACKING—In carpentry, nailing blocks placed back of plastering or other surface finishing material to provide nailing for the wood finishing. Also, cutting off the corners of hip rafters so as to give the sheeting a full bearing. Also, hollowing out the back of finishing lumber.
In masonry, the material with which the wall back of the facing material is built. To back with brick, block, or stone.

BACK PLASTERING—A rough coat of plastering placed between the plastering of an outside wall and the boxing to protect the interior from the elements. See Plaster and Plastering Products, **517-520.**

BACK PLATE—A plate used on the inside of a door to frame the opening for a letter drop or plate on the front of the door. See Hardware.

BACK-UP STRIPS OR LATHING BOARDS—Strips nailed at angles of walls and partitions to make solid corners for nailing ends of lath. **Plastering details, 517.**

BACKWATER VALVE—An automatic valve set in the sewer lateral to prevent sewerage from backing up into the basement or plumbing fixtures. Also Bell Traps. **Details of, 116.**

RAKE—The cornice of a gable roof, especially the outer edge; the inclination of the cornice of a gable. **Details of, 74.**

BALLOON FRAMING—A type of house framing. **House construction details, 60-70.**

BALUSTERS—Small spindles or columns forming the main part of a railing for stairway or balcony, fastened between a bottom and top rail. **Illustration of, 62; Details of, 218.**

BALUSTRADE—A row of small balusters supporting a coping or cornice and forming a parapet or enclosure. **Illustration of, 218; Moulding, 220.**

BAND SAW—See Tools.

BARGE BOARD—The larger rake member of a house exterior cornice. See Verge Board. **Cornice details, 74.**

BARN EQUIPMENT—Those fixtures and accessories that are incorporated in a barn or similar farm building that facilitate the housing of livestock, storage and handling of food, and maintenance of cleanliness. **Details of, 547.**

BARN SASH—Small sash used principally in barns and other farm service buildings, usually four or six light. **Standard sizes, 159.**

BARN SIDING—Wood drop siding or tongued and grooved boards used in enclosing a barn or other farm building. See Siding.

BARREL BOLT—A round bolt mounted on a plate with a frame projecting from its surface to hold the bolt in place and guide it. **Details of, 282.**

BAR SASH LIFT—A sash lift made of a bent bar which is screwed at both ends to the sash, making a handle by which the sash may be raised and lowered. **Illustration of, 159.**

BASEMENT—A story of a building partly or wholly underground, the walls of which usually form the foundation support for the rest of the structure. **Cement floor, 62; Sash, 62; Waterproofing of, 536.**

BASE (ROOM)—Also Base Board. A flat piece of finish lumber frequently moulded on one edge and from 4" to 10" in height. It is installed to provide a finish at the junction of wall and floor. Usually installed with a base shoe. **Illustration of, 62; Illustration of, 164; Details and sizes, 220.**

BASE TILE—Performs the same function as baseboard, but made of rubber, composition asphalt, etc., and used to finish rooms lined with materials other than plaster or wood. **Application details, 388.**

BASE MOULDING—Moulding used to trim the upper edge of interior base board. **Details and sizes, 220.**

BASE SHOE—Moulding used next to the floor on interior base board. Sometimes called a carpet strip. **Details and sizes, 220.**

BASEMENT ENTRANCE DOORS—Unit assemblies, usually of metal, that permit access to cellar from outside of a building. **Details of, 115; sizes and specifications, 115.**

BASEMENT FRAMES AND SASH—Metal or wood windows used for basement openings. Usually two or three light. **Illustration of, 62; Metal, 115; Details of, 146.**

BASTARD SAWN—Hardwood lumber in which the annual rings make angles of 30 to 60 degrees with the surface of the piece. **Diagram of, 52.**

BATHROOM—A room equipped with a bath tub or shower stall, lavatory, water closet, and usually storage facilities for articles used in connection with the toilet. **Types, 490; Equipment, 490; Package selling, 505.**

BATTEN—Narrow strips of wood or metal used to cover joints of sheathing or other material to keep out the weather.

BATTER BOARD—One of a pair of horizontal boards nailed to posts set at the corners of an excavation, used to indicate the desired level, also as a fastening for stretched strings to indicate outlines.

BATT INSULATION—Blanket insulation made in short lengths 2, 3, or 4 feet long, to facilitate handling and installation. **Details of, 438; Installation data, 438.**

BAY—A bay is properly called a "bow" and is any projecting part of a building in the form of an arc or polygon.

BAY WINDOW—A window placed in the bay, or bow, of a building.

BEADED CEILING—Ceiling boards that are beaded, usually 5/8-inch thick, 3¾ inches wide and matched.

BEAD, CORNER—See Corner Bead.

BEAM—A term generally applied to the principal horizontal members of a building, so installed as to support the load of the structure. Beams may be made of steel, wood, or other materials. Also called girders. In lumber terminology, beams and stringers are 5 inches and thicker by 8 inches and wider, and graded for use horizontally with load applied on the narrow face, or in tension. **Timber, 49; Span of, 60; Illustration of, 60; Estimating, 60; House cross-section, 62.**

BEARING—The point of support on a wall, pillar, beam, or structural member. **Details of joists on girder, 60.**

BEARING PARTITION—A partition which supports any vertical load in addition to its own weight. **Construction details, 60-70.**

BEARING WALL—A wall which supports any vertical load in addition to its own weight. **Details of, 64.**

BED MOULDING—A moulding in an angle, as between the overhanging cornice, or eaves of a building and the sidewalls. **Details and sizes, 218.**

BELL TRAP—A covered iron receptacle placed in concrete floors and attached to drainage lines to carry off water from the floor. **Details of, 116.**

BEVEL—One side of a solid body is said to be on a bevel with respect to another when the angle between the two is greater or less than a right angle. **Of rafters, 68.**

BEVEL OF DOOR—Refers to the angle on the front edge of a door. The usual bevel is 1/8-inch to 2 inches.

BEVEL OF LOCK—Term to describe the direction of the bevel of the latch bolt. Regular bevel usually indicates a lock that functions on a door opening "in," and reverse bevel indicates a lock for a door opening "out." **Illustration of, 282.**

BEVEL SIDING—Also called Lap Siding. Used as the finishing siding on the exterior of a house or other structure. It is usually manufactured by resawing surfaced boards diagonally to produce two wedge-shaped pieces. These run from 3/16-inch on the thin edge to 1/2-inch or 3/4-inch on the other edge, depending on the width of the siding. **House cross-section, 62; Types, 424; Sizes, 424; Application, 424, 425.**

BIT—Of a key, the blade which projects and engages either or both the bolt and tumblers of a lock. Same as Wing. Also, an auger-type boring tool. **Details of, 282.**

BLANKET INSULATION—Mineral, wood, glass, or other fibers; formed into a strip of uniform thickness and securely fastened to paper, foil, etc. Identical to "Batts" except blankets are supplied in long lengths. **Details of, 438; Installation data, 438.**

BLINDS—More commonly called Shutters. Light wooden sections to close over windows on the outside. Most currently installed shutters are for the purpose of ornamentation only. **Illustration of, 62.**

BLIND STOP—A rectangular moulding, usually 3/4-inch long by 1 3/8 inches, used in the assembly of a window frame. **Details of, 146.**

BLIND TENONED—Any paneled assembly made with the tenons on the ends of the rails mortised into, but extending only part way through the stile. A term used in millwork and other wood fabrication.

BLOCK FLOORING—Wood—Small squares of flooring, made from narrow, short strips of regular flooring or in solid blocks of wood. **Details of, 384.**

BLOCKS, CEMENT—Precast blocks made of cement in a mould. For basement or above-ground walls, brick veneer, etc., concrete blocks are laid with mortar like bricks. **Aggregates for, 536; Sizes and shapes, 536; Table of quantity, 536; Application data, 536.**

BLOCKS, GLASS—Made in various sizes for outside wall sections, interior partitions, and many decorative uses, glass blocks admit or transfer light, and have high insulation qualities. They are laid with mortar, similar to bricks. **Details of use, 337; Quantity table, 337; Mortar for, 337.**

BLOCKS, GYPSUM—Used for non-load-bearing partitions.

BOARD, FIBER OR INSULATION—See Insulation Board.

BOARDS—Yard lumber, less than 2 inches thick and 8 or more inches wide. Narrower material is usually referred to as "strips." **Classification of, 50; Measurement, 52.**

BOARD SHEATHING—Composition. See Insulating Board Sheathing.

BOARD FEET—Unit of measurement by which lumber is sold in the United States. Equivalent to a piece of lumber 1-inch thick, 12 inches wide, and one-foot long. **Illustration of, 52; How to figure, 52; Estimating by, 58.**

BOLT—A bar designed to prevent a door from being opened when it is set. Also, a threaded, blunt-end screw, used with a matched nut to secure two objects together. **Of locks, 282; Fastening devices, 292.**

BOND—The connection between units of any masonry structure, formed by lapping them upon one another in such a way as to break joints vertically and horizontally. Also, a term used to describe the adhesion of veneers, laminates, and other materials. **Details of, 541; American or common, 541; English, 541; Flemish, 542; Dutch, 542; Pattern, 542; Illustrations, 542, 544.**

BOND TIMBERS—Either blocks or longer pieces built into masonry for the purpose of providing nailing or other anchorage for finishing. A long timber placed in brick walls to hold the brickwork together; a wall plate; a lintel.

BOSTON HIP—A hip finished with shingles saddled over the hip and intersecting with the courses of shingles from both sides of the roof; a shingle hip finish. See Roofing.

BOW WINDOW—Same as Bay Window.

BOX CORNICE—A cornice that is completely enclosed by means of the roofing, fascia, and plancher. A built-up cornice shaped in cross-section somewhat like a box. **Details of, 74; Illustration, 74; Estimating, 74.**

BOXED STAIRS—Stairs which pass from one floor to another between two walls. Neither side is open.

BOX NAIL—A flat-headed nail, a little lighter than a common nail. **Details of, 295, 296, 298.**

BOX OR SQUARE BOLT—Same as Barrel Bolt, only the bolt itself is square or flat. See Hardware,

BOX SILL—A header nailed on the ends of the joists and resting on a wall plate. Used in frame building construction. **Illustration of, 60; Estimating, 60.**

BRACE—An inclined piece of lumber used to form a triangle and thereby stiffen a structure. A brace to support a rafter is called a "strut." Also, a tool used to hold a bit or auger for drilling holes in wood. **Frame construction details, 68.**

BRACED FRAME—A type of house framing. **Illustration of, 62.**

BRASHNESS—A condition of wood characterized by low resistance to shock and by abrupt failure across the grain without normal splintering. **Strength properties of lumber, 54.**

BRICK—Building material made from clay by moulding to shape and hardening with heat. **How made, 541; Methods of laying, 541, 542; Estimating requirements, 542; Veneer, 542; Floors and walks, 543; Chimneys, 543; Fireplaces, 544.**

BRICK CONSTRUCTION—See Construction, Brick.

BRICK, FIRE—Made from fire clay to withstand high temperatures without crumbling. Size 2½ x 4½ x 9 inches. Used to line the back hearth and fire box of chimney. **House cross-section, 62; Details of, 544.**

BRICK FILL—See Beam Fill.

BRICK MOULD—A moulding used on window and door frames for masonry to finish the angle between the frame and the brick jamb on the outside; a staff head. **Details and sizes, 220, 543.**

BRICK SIDING—See Insulated Brick Siding.

BRICK VENEER—A facing of brick laid against frame or tile wall construction. See Construction, Brick Veneer. **Details of, 542, 543.**

BRIDGING—The stiffening of floor joists and partition studs by fastening small pieces in between is called "solid" bridging. Where a double row of diagonal bracing in opposite directions is used in a joist span, it is called "cross" bridging. There are also available several types of prefabricated metal bridgings, ready for installation between standard width joists.
All joist spans less than 9 feet should have one row of bridging. Longer spans require two rows, evenly spaced. **Illustration of, 70; Details of, 70; House cross-section, 62; Estimating, 72; Treated lumber, 76.**

BROWN COAT—Coat of plastering directly under the finish coat. In two coat work, the brown coat is applied directly over the lath. In three coat work, the brown coat is the second coat, lying between the scratch and the finish coats. **Details of, 517, 518.**

BRUSHES—In painting, a tool consisting of bristles bound together in a handle to facilitate the spreading of paint and other liquid coverings. **Types of, 260; Uses, 260; Illustration of, 262; Care of, 262.**

BUILDER'S HARDWARE—See Hardware.

BUILDING CORNERS—See Corner Mitres.

BUILDING PAPER—Insulating paper, applied between the sheathing and the outer wall covering to stop wind infiltration. It is a water repellent material, but not a vapor barrier. Building paper is also used between sub-floor and finish. **Over sub-flooring, 70; House cross-section, 62; With hardwood flooring, 382; With asphalt tile flooring, 390; With asphalt shingles, 410; With asbestos shingles, 414; With wood shingles, 416; Wood siding, 420; Details of, 420.**

BUILT-INS—A term used to describe cabinets, shelves, bookcases, etc., that are built into walls and partitions as a permanent part of the wall. Also may apply to corner cupboards, breakfast nooks, and similar accessories that are permanent fixtures in a room. **Plywood for, 108; Mantels, 214; Cabinets, 214, 486-494.**

BUILT-UP GIRDER—A girder that is made with more than one member; a girder made of planks nailed or bolted together. **Details of, 60; Laminated wood, 78.**

BUILT-UP ROOF—Roofing applied in sealed waterproof layers where there is very little slope or pitch. **Details of, 412.**

BUNGALOW SIDING—Term usually applied to bevel siding 8 inches or more in width. **Details of, 424.**

BUTT OR BUTT HINGE—A door hinge designed for use on the butt or edge of a door, as contrasted to a strap or flat hinge applied to the surface of a door. **Illustration of, 284; Of a shingle, 399, 414.**

BUTT JOINT—The point where the ends of two timbers or other members meet in a square-cut joint. See Joint.

BUTTRESS—Projecting masonry in the nature of a pilaster used for architectural effect and to strengthen a wall against the thrust of a roof.

CABINET—A room fixture made of metal or wood, either built-in or accessory, equipped with sliding or swing doors, and designed for the storage of items. Cabinets are made in a variety of sizes, styles, and shapes, according to their intended use. **Plywood for, 101; Details of, 214; Hardware, 286; Kitchen, 485-494; Bathroom, 494; Medicine, 494.**

CABINETS, BASE—Drawer or cupboard type cabinets that rest on a floor and provide a table top, counter, drainboard, or sink. **For kitchens, 485-494.**

CABINET HARDWARE—A wide variety of specially designed and finished hardware for doors and drawers of cabinets, particularly those that are built-in as an integral part of a room; as kitchen cabinet, corner cabinet, etc. **Details of, 285.**

CABINETS, MEDICINE—Cabinets usually designed for installation in bathroom walls, and faced with a mirrored door, for storage of medicines and sundries in a bathroom. Some are independently lighted and wired for extra electrical outlet. **Details of, 494.**

CABINETS, WALL—Open and closed cupboard type cabinets for storage of kitchen supplies, dishes, linen, etc., in kitchens, laundry, and bathrooms. **Details of, 485-494.**

CABLE—A term usually applied to the lead wires in the electrical circuits of a building. **Details of, 474.**

CALCIMINE—A term applied to a water paint, consisting of a calcimine base and coloring pigment which, when mixed with the proper proportion of water, makes a liquid covering for walls, ceilings, and other surfaces. **Details of, 244, 256.**

CALCIUM CHLORIDE—A salt granulate used in cold weather as a part of water in mixing concrete and mortar to lower its freezing point. **In concrete, 535; Estimating, 535.**

CAMBER—The convexity of a truss or beam to offset weight or pressure which might result in its becoming concave.

CANOPY—A projection over doors or windows as a protection against the weather. **House cross-section, 62.**

CANTILEVER—A projecting beam or member supported at only one end, built into a wall or pier. A bracelike member supporting a cornice or balcony.

CANVAS ROOFING—On roof decks which are too flat even for roll roofing, 14 oz. canvas thoroughly painted is sometimes used. **Details of, 412.**

CAP, MOULDING—Moulding used at the top of window and door trim to ornament the plainness of the trim. **Drip, 220; Metal, 224.**

CAPPED BUTT—A hinge with a cap to cover the fastening screws of each leaf. The cap is attached to the butt with small screws. **Illustration of, 284.**

CAPS AND BASES—Metal plates that hold top and bottom ends of basement columns against floor and joists. **Details of, 116.**

CASE—(a) To put on casing; to do interior finishing, especially around openings. (b) A chest as a tool case. **Window casing, details of, 62, 146; Door, 171.**

CASED DOOR OPENING—In finishing, a door opening cased up with mitred joints at the corners, and plinth blocks at the bottom to receive the base. **Illustration of, 171.**

CASE HARDENED—This term is applied to lumber when the outsides are dried before the interior parts have a chance to dry. When the interior finally dries out, the lumber will check. Also, a method of hardening steel.

CASE, LOCK—The box or enclosure which contains the bolts and mechanism. **Details of, 280, 282.**

CASEMENT FRAMES AND SASH—Frames of wood or metal enclosing sash that are opened by means of hinges affixed to the vertical edges. **Metal, 116; Types, 145; Sizes of, 146; Installation details, 148.**

CASEMENT WINDOW HARDWARE—Specially designed hardware to actuate and secure casement windows. **Details of, 286.**

CASING—Wide moulding of various widths and thicknesses used to trim window and door openings. **Window, 146; Door, 165; Moulding, 224.**

CASING NAIL—A nail with a flaring head used mostly for outside finish and for nailing flooring. **Details of, 295.**

CAULKING COMPOUND—A mastic especially designed to seal out the weather around the edges of windows, door frames, chimney, etc. **As a weatherstrip material, 214; Details of, 338; Use in roofing, 412; Asbestos cement shingles, 414; Package selling, 505.**

CAULKING GUN—A tool consisting of a cylinder at one end of which is a nozzle and at the other a hand-actuated plunger. When filled with caulking compound and forced by the plunger through the nozzle, compound is delivered in a thin ribbon to cracks, etc., to be sealed. **Details of, 338.**

CAULKING GUN CARTRIDGE—A self-contained package of caulking compound that is inserted intact into some caulking guns. **Details of, 338.**

CEDAR CLOSET LINING—A thin, tongued and grooved board for lining closets. Made from red cedar, whose aromatic qualities protect clothing from moths and other insect pests.

CEDAR POSTS—Made from small white cedar trees for use as fence posts. Usual lengths are 7, 8, and 10 feet, with diameters from 2 to 8 inches. **Use and application on farm, 550.**

CEDAR SHINGLES—Manufactured from western red cedar for roofing and siding. **Details of, 416; Sizes and grades, 416; Application, 416, 418; Siding, 420.**

CEILING JOIST—See Joist.

CEILING LUMBER—A wooden strip of lumber 4 or 6 inches wide of varying thicknesses. 3/8", 1/2", 5/8", or 3/4", worked to a pattern, beaded or "V" grooved. Used to cover the ceiling joists of a porch. **Details of, 50, 52.**

CELLAR ENTRANCE DOOR ASSEMBLIES—A prefabricated unit, made of metal, that provides the access door to cellars. **Details of, 115; Sizes and Specifications, 115.**

CELLAR FRAMES AND SASH—See Basement Frames and Sash.

CELLAR POST—See Post.

CELLAR WINDOW—A window in the wall of a basement or cellar. **See Basement Frames and Sash.**

CEMENT—In the building industry, a fine gray powder comprised of lime, silica, and alumina. Ingredients are crushed and ground and then "burned" in a kiln. Final process involves the addition of gypsum and another pulverizing. When mixed with aggregates and water a semi-fluid substance results that sets-up into a rock-like material. **In plaster composition, 518; Aggregates, 533; How to mix, 534; Dampproofing, 534; Paints, Mortars, 536; Masonry, 536; Blocks, 540; Use on farms, 553.**

CEMENT, ASBESTOS—See Asbestos Cement.

CEMENT BLOCKS—Blocks in which the principal component materials are cement and sand or gravel, formed into shapes under pressure. See Blocks, Cement. **Aggregates for, 536; Uses, 536; Sizes and shapes, 536; Table of quantities, 540; How to build with, 540; Manufacturing equipment, 584.**

CEMENT, BRICK—A waterproofed masonry cement used for every kind of brick, tile, concrete block, stone masonry, and stucco. **Details of, 536.**

CEMENT-COATED NAILS—Nails that are coated with a secret formula and baked. Used mostly by box manufacturers, they are used in building in laying parquetry flooring, wallboards, roofing, etc. **Details of, 295, 296.**

CEMENT COLORS—A special mineral pigment used to color cement. When color is desired in cement floors or other surfaces, the cement work is done in two operations. First, a base coat is poured and left rough. The topping coat is then applied (usually 1-inch thick), and this includes the coloring pigment. **Estimating, 535, 536.**

CEMENT, KEENE'S—The whitest finish plaster obtainable which produces a wall of extreme durability. Because of its density it excells for a wainscoating plaster for bathrooms and kitchens, and in public auditoriums and buildings. **Details of, 518.**

CEMENT MIXING EQUIPMENT—Machines designed to mix the ingredients of concrete. Conchrete mixers, Ready-mix plants, etc. **Types of, 533; Illustration of, 584; Details of, 584.**

CEMENT MORTAR—A mortar made of sand and cement; sometimes a portion of lime is added, but it should be in a minor quantity. **Proper mixes for masonry, 536.**

CEMENT PLASTER—Gypsum plaster formulated to be used with the addition of sand for base-coat plaster. Also called neat goods or compound. **Plaster composition, 517-529.**

CEMENT, PORTLAND—See Cement.

CEMENT, WHITE—Portland cement is gray in color. When whiteness is required, a cement specially burned to make it white is used. It has the same qualities as Portland cement. **Details of, 517-529.**

CERAMIC TILE—A glazed tile used on interior walls where an extremely durable, hard-surfaced finish is required. Made of silica and glazed in a kiln, ceramic tiles are used in kitchens, bathrooms, on floors and walls. See Structural Glass. **Details of, 330.**

CESSPOOL—A pit with no outlet into which sewage is drained. Such pits should be located at safe distances from wells, homes, streams, etc., for sanitary reasons.

CHECK—In lumber, a lengthwise separation of the wood which usually occurs across the rings of annual growth. **How to avoid by drying, 54.**

CHECK RAIL—Meeting rails sufficiently thicker than a window to fill the opening between the top and bottom sash made by the parting stop in the frame. They are usually beveled. **Details of, 146.**

CHECK RAIL WINDOW FRAME—Brick Veneer Construction. A window frame adapted to brick veneer construction, in which a check rail window may be installed. The essential parts of a brick veneer frame are the same as for frame construction except that the outside casing is replaced by a brick moulding (staff bead) and a blind stop should be used that is wide enough to provide nailing space on the adjacent stud. **Details of, 146.**

CHIMNEY—A structure, usually vertical, containing one or more passages or flues, by which the smoke, gases, etc., of a house fire or furnace are carried off. **Framing around, 68; House cross-section, 62; Flashing, 406; Details of, 456; Construction, 456; Precast, 456; How to build, 543; Estimating, 543.**

CHIMNEY BLOCKS—See Blocks, Chimney.

CHIMNEY BREAST—The horizontal projection of a chimney from the wall in which it is built. Commonly applied to the chimney projection on the inside of a building. **House cross-section, 62.**

CHIMNEY CAP—A coping of concrete, stone, tile, terra-cotta, etc., surmounting the brick work to protect the upper mortar joints from weather. **House cross-section, 62.**

CHIMNEY POT—A cylindrical pipe of earthware, metal, or other material placed at the top of a chimney to increase the draft, or as an ornament. **House cross-section, 62; Details of, 544.**

CHIMNEY, PRECAST—A type of chimney, manufactured in sections that can easily and quickly be installed in a structure. **Details of, 456, 544.**

CHLORINATED PHENOL—A chemical used in the treatment of wood to make it resistant to decay and deterioration under extreme conditions of service. **Details of, 76.**

CHROMATE—A salt of chromic acid, used in the manufacture of chromate paints which are used primarily as a protective coating for exposed metals. **Details of, 256.**

CHROMATED ZINC CHLORIDE—A chemical used in wood preservation. **Details of, 76.**

CINDER BLOCKS—Same as cement blocks except that the principal materials are cement and cinders. **In concrete blocks, 536.**

CINDER FILL—Cinders placed to a depth of 3 to 6 inches under basement floors, porches, etc., to assist in keeping basement dry, to prevent settling of the floor, and to facilitate drainage of the soil beneath. **House cross-section, 62.**

CLEAN-OUT DOOR—A cast iron door with frame placed near the base of smoke flues and ash pits to permit cleaning. See Ash Pit Door. **House cross-section, 62; Details of, 115; Illustration of, 484.**

CLOSED CORNICE—A cornice that is entirely enclosed by means of the roofing, the fascia, and the plancher. See Box Cornice. **Details of, 74.**

CLOSET LINING—See Cedar Closet Lining.

CLOSET POLE—A round moulding on which clothes hangers may be hung in a closet or elsewhere. **Details and sizes, 224.**

COAL CHUTE—A chute, usually of metal, built in the wall of coal bins through which the coal is shoveled. **Details of, 116.**

COAT—A layer of any substance covering another, as of paint, plaster, etc. **In painting, 258, 260; In plastering, 517.**

COLLAR BEAM—A horizontal beam fastened above the lower ends of rafters to add rigidity. **Details of, 60; House cross-section, 62.**

COLONIAL—A name given to a number of articles of stock manufacture which reproduce the designs used for the same articles during the Colonial period of American architecture. **Cornice, 74; Siding, 424.**

COLONIAL SIDING—Plain, square-edge boards from 9 to 12 inches wide, used for siding with a wide exposure to the weather. **Details of, 424.**

COLUMN—Any supporting pillar of wood, steel, masonry, or other material. **Basement, 120.**

COMBINATION DOOR—A door which can be easily changed from a screen door to a storm door by removing the screen panel and replacing it with a panel of glass. All combination doors are made from 1/2-inch to 1-inch oversize in width to permit them to occupy the space between the side casings, or brick mouldings of a regular door frame, and 1-inch oversize in height to allow for variation of threshold or slope of sill. **Use and advantage, 166.**

COMBINATION WINDOWS—Windows designed for use in the same manner as combination doors. **Details of, 166.**

COMMON—A grade of lumber that permits three or four sound knots to each board, but two-thirds of one side must be clear. **Details of, 52.**

COMMON—In lumber grading, a term applied to the grades less than D. **Classification of, 52, 54.**

COMMON BOND—In brickwork, a bond that consists of one course of headers to from four to seven courses of stretchers; also called American Bond. **Details of, 541.**

COMMON BRICK—Ordinary brick used for building walls, etc., as opposed to fancy or ornamental brick. **Details of, 541.**

COMMON LUMBER—See Lumber, Common.

COMMON NAIL—A flat-head nail used for rough work. It is made in many sizes and its uses are universal. **In house construction, 60-70; Details, 295-298.**

COMMON RAFTER—One of the main rafters of a roof. **Details of, 64, 66, 68; Estimating, 68; House cross-section, 62.**

COMPOSITION ROOFING—Built-up roofing. Made of felt, asphalt, granules, etc., in rolls and shingles. **Details of, 405.**

COMPOUND—Term used for base coat plaster, to which sand is added on the job. In some localities refers to neat goods or cement plaster. **Details of, 518.**

COMPREG—An assembly of veneer impregnated with liquid resin and bonded together under high pressure and heat. Original thickness of plys is reduced approximately one-third and the finished material has more of the characteristics of a plastic than of wood. **Details of, 78; Illustration of, 78.**

CONCRETE—Made by mixing Portland cement, sand, pebbles, crushed stone, and water. Sand is called fine aggregate and the pebbles or crushed rock is called coarse aggregate. **Painting, 258; Mobile machine mixed, 533; Aggregates, 533; How to mix, 534; Dampproofing, 534; Building a sidewalk, 535; Blocks, 536, 540; Mixing equipment, 584.**

CONCRETE BLOCKS—See Cement Blocks.

CONCRETE BLOCK PLANTS—Machines that are specially designed to mass produce all types and sizes of concrete blocks. **Details of, 584.**

CONCRETE PAINT—A paint specially prepared for concrete; a mixture of cement and water that is applied on concrete walls with a brush. **Details of, 535.**

CONCRETE, PLAIN—Concrete containing not more than two-tenths of one percent of reinforcement. **Details, 533-540; Use on farms, 553.**

CONCRETE, REINFORCED—Concrete containing more than two-tenths of one percent of reinforcement, and in which the reinforcement is so imbedded that the two materials act together in sustaining the load. See Reinforcing. **Details of, 536.**

CONDENSATION—In a building, beads or drops of water, and frequently frost, that accumulate on the inside of the exterior covering of a building when warm, moisture-laden air from the interior reaches a point where the temperature no longer permits the air to sustain the moisture it holds. **Details of, 436, 447.**

CONDUCTION—A term applied to the transfer of heat by conduction, as heat flowing from one end of a metal object to another. See Insulation.

CONDUCTOR PIPE—Pipe that carries water from the roof gutter. Also called Leader or Downspout. **House cross-section, 62.**

CONDUIT—A channel to convey water or other liquids. Also a rigid metal tubing that carries the wires in an electrical circuit. **Electrical, 344.**

CONSTRUCTION—ABODE—A type of construction in which the exterior walls are built of blocks that are made of soil mixed with straw and hardened in the sun. This type of construction is employed chiefly in the warm, dry climate of the southwest.

CONSTRUCTION, BRICK—A type of construction in which the exterior walls are bearing walls made of brick or a combination of brick and tile masonry. **Details of, 541.**

CONSTRUCTION, BRICK-VENEER—A type of construction in which a wood frame construction has an exterior surface of brick applied. **Details of, 541-42.**

CONSTRUCTION, Dry-Wall—A type of construction in which the interior wall finish is of a material other than plaster or material similar to it, applied without the use of mortar. **Details of, 362, 368.**

CONSTRUCTION, EXTERIOR-PROTECTED—That type of building construction in which the exterior walls, party walls, and the fire walls are of incombustible materials and self-supporting, and interior structural framing is wholly or partly of wood or similar materials.

CONSTRUCTION, FIREPROOF—A type of construction designed to withstand a complete burnout of the contents without impairment of structural integrity.

CONSTRUCTION, FRAME—A type of construction in which the structural parts are of wood or dependent upon a wood frame for support. In codes, if brick or other incombustible materials are applied to exterior walls, the classification of the type of construction is usually unchanged. **Details of, 60, 70; House cross-section, 62.**

CONSTRUCTION, ORDINARY—Usually refers to construction in which the exterior walls are of masonry, or of reinforced concrete; and in which the interior structural elements are wholly or partly of wood. **Details of, 542-543.**

CONSTRUCTION, PREFABRICATED—A type of construction so designed as to involve a minimum of assembly at the site, usually comprising a series of large units or panels manufactured in a factory. **Wood laminated framing, 78; Details of, 536; Yard fabricated farm buildings, 558.**

CONSTRUCTION, RAMMED EARTH—A type of construction in which the exterior walls are bearing walls composed of a controlled combination of sand, clay, coarse aggregate and moisture compacted by pressure into forms.

CONSTRUCTION, REINFORCED CONCRETE—A type of construction in which the principal structural members, such as floors, columns, and beams, are made of concrete poured around isolated steel bars or steel mashwork in such a manner that the two materials act together in resisting force. **Details of, 536.**

CONSTRUCTION, SKELETON—A type of construction in which all external and internal loads and stresses are transmitted to the foundations by a rigidly connected framework of metal or reinforced concrete. The enclosing walls are supported by the frame at designated intervals, usually at each story. **Details of, 124.**

CONSTRUCTION, STEEL FRAME—A type of construction in which the structural parts are of steel or dependent on a steel frame for support. **Details of, 124.**

CONSTRUCTION, UNPROTECTED-METAL—A type of construction in which the structural parts are of metal unprotected by fireproofing.

CONVECTION—The transfer of heat by passage of an air current over a heated object and carrying off a portion of the heat. See Insulation.

CONVEX—A bulging curve; a swelling; as opposed to concave.

CONVEYORS—See Mechanical Handling Equipment.

CORK TILE—A flooring material, made in squares, in which ground cork is compounded and compressed into a tough, durable substance. **Details of, 390; Uses and application, 390.**

CORNER AND JAMB GUARDS—Wheel guards made of cast iron to protect doorways and corners of buildings. **Details of, 116.**

CORNER BEAD—A strip of formed galvanized iron, sometimes combined with a strip of metal lath, placed on corners before plastering to reinforce them. Also, a strip of wood finish three-quarter round or angular, placed over a plastered corner for protection. **Details of galvanized, 122; Solid wing, 122; Wood details and sizes, 224.**

CORNER BOARDS—Used as trim for the corners of a house or other frame structure covered with siding, either bevel or drop. One piece should be wider than the other by the thickness of the pieces so they will appear the same width when in place on the building. Usually one piece of 1x4 and one piece of 1x5 are used. The length of corner boards is the height of the frame wall. Siding should butt up against the corner board. **Details of, 424.**

CORNER BRACES—Diagonal braces let into studs to reinforce corners of frame structures. **Details of, 64; House cross-section, 62.**

CORNER MITRES—Metal angles, usually of galvanized, formed to fit over the mitred corners of bevel siding to make a neat joint, and to protect the joint from weather. **Details of, 116; Sizes and specifications, 116.**

CORNER POSTS OR STUDS—The two or three studs spiked together to form a corner in a frame building. **Details of, 66; Illustration of, 70; House cross-section, 62.**

CORNERITE—Metal mesh lath cut into strips and bent to a right angle. Used in interior corners of walls and ceilings on lath to prevent cracks in plastering. **Details of, 529; Illustration, 529.**

CORNICE—The horizontal moulded trim encircling a building at the roof line. On a house, it forms the connection between the roof and the sidewalls. Also, interior trim, wood or plaster, at the angle of sidewalls and ceilings. **Details of, 74; Estimating, 74; Illustration of, 74; House cross-section, 62.**

CORRUGATED ROOFING—Roofing made of sheet metal that is either pressed or rolled into corrugations; corrugated iron, aluminum, etc. **Aluminum, 120; Sheet metal, 122.**

COUNTER FLASHING—To flash over flashing, as to counter flash around a chimney on a roof; the flashing itself. See Flashing.

COUNTER-SINK—To make a cavity for the reception of a plate, iron, or the head of a screw or bolt so it will not project beyond the face of the work.

COURSE—A continuous range of stone or brick of uniform height in the wall of a building. Also, a row of shingles. **Of asphalt shingles, 399; Wood shingles, 420; Brick, 541-542.**

COVE—A rounded internal angle. Opposite to bull-nose. See Moulding.

COVE MOULDING—A three-sided moulding used wherever small angles are to be covered. **Details and sizes, 218; Metal, 224; Composition, 388.**

CREOSOTE, COAL-TAR—Chemicals used to treat lumber and make it more resistent to deterioration and decay. **Details of, 76.**

CRICKET—A water shed built behind a chimney or other roof projection. See Flashing. **Details of, 406.**

CRIPPLE—A term applied to a short, supporting stud, used over door headers, or above or below window headers in rough framing. **Details of, 68; House cross-section, 62.**

CRIPPLE JACK—A jack rafter running from a valley to a hip, or from a blind valley or blind hip to a valley or to a hip. **Construction details, 68.**

CROOK—A form of warp resulting in distortion of a board in which the edge is convex or concave lengthwise. See Warp.

CROSS BREAK—A separation of wood cells in a piece of lumber across the grain.

CROSS GRAIN—The grain of the wood running diagonally or at a right angle to the length of the timber. **Diagram of, 52.**

CROSS LAMINATED—A term used to describe the method of building up plywood, in which the direction of grain is alternated with successive layers. **Details of, 101.**

CROSS PANEL DOOR—A door in which all the panels have their longest dimension parallel to the rails is called a cross panel door. **Illustration of, 171.**

CROWN—An upward bend; the bowage of a piece of timber, e.g. the crown of a joist should go up. To frame a crown on a joist, etc. In arches, the upper part of an arch; the highest part. **Cornice, 74.**

CROWN MOULDING—A moulding used on the face or outer edge of the cornice. It is made for stock in several patterns, and in sizes from ¾ x 3 inches to ¾ x 5 inches. **In cornice construction, 74; Details and sizes, 218, 220.**

CUBIC CONTENTS—The cubic contents of a building is the enclosed space in terms of cubic measurement. **Use in estimating, 58.**

CUP—In lumber, a form of warp resulting in distortion of a board in which the face is convex or concave across the grain or width of a piece. See Warp.

CUP ESCUTCHEON—A plate for use on sliding doors with a recessed panel to provide a finger hold as well as space for the knob or latch control, all of which does not project beyond a line flash with the door. See Hardware.

CURB STRINGER—A three-member assembly sometimes used in an open stair consisting of one housed stringer and one faced stringer surmounted with a shoe rail to receive balusters. **Stair construction, 218.**

CURTAIN WALL—A non-bearing wall between columns or piers which is not supported by girders or beams.

CUT NAIL—The old style nail that was cut to its shape, as opposed to a wire nail. **Details of, 295.**

CUTTING BILL—A list of cuttings with sizes given in accurate measurements, to be used for a specified purpose.

CYLINDER LOCK—A lock with the keyhole and tumbler mechanism contained in a cylinder separate from the lock case. **Details of, 282.**

DADO—A rectangular groove in a board or plank. In interior decoration, a special type of wall treatment.

DAMPER—A moveable, hinged plate or disc inserted in smoke pipes to regulate draft, or in chimneys above the fireplace to control draft. See Dome Damper. **Details of, 118; Illustration, 484.**

DAMPPROOFING—Painting the outside or inside of foundation walls with a waterproofing material, or mixing waterproofing material into the foundation walls to prevent water seepage from the outside. Asphalt waterproofing (foundation coating) should be carefully brushed on all surfaces. Two coats are better than one heavy coat. A gallon will cover approximately 100 square feet. **Exterior walls, 536.**

DARBY—A flat tool used by plasterers in working, especially on ceilings. It is generally about 7 inches wide and 42 inches long, with two handles on the back. **Details of, 518.**

DEAD BOLT—In a lock, one with a square head, controlled directly by the key when moved in either direction. **Details of, 282.**

DEADENING FELT—A heavy felt used between sub-floor and finish floor as a sound deadener and insulator. Used also as a liner under linoleum. See Building Paper.

DESIGN—The plans, elevations, sections, and whatever other drawings may be necessary for an edifice to adequately exhibit the design. The term "plan" has a restricted application to the horizontal projection and "elevation" refers to the vertical or exterior views. **Store design, 595.**

DETAIL—As used by architects and buildings, detail refers to the smaller parts into which a composition may be divided. It is applied generally to mouldings and other enrichments, to drawings showing the construction and manner of assembling the various parts.

DIMENSION—All yard lumber except boards, strips, and timbers; that is, yard lumber 2 inches to but not including 5 inches thick, and of any width. **Classification, 49, 50, 52; Standard sizes, 56; Uses in house construction, 60, 70.**

DISAPPEARING STAIR—A stair that folds up and disappears ino an opening in a ceiling. See Attic Stairway.

DISC TUMBLER LOCK—See Lock.

DISPLAY FIXTURES—Cabinets, shelves, racks, counters, etc. that are designed specifically for the effective display of merchandise. **Details of, 595.**

DISPLAY FIXTURE HARDWARE—Those items of hardware, brackets, hinges, hangers, etc. that are specially designed for incorporation with a display fixture for the display of merchandise in a store. **Details of, 595.**

DOME DAMPER—A cast iron frame and damper placed above the brick arch and at the bottom of the smoke chamber of a fireplace. **Details of, 121; Illustration of, 484.**

DOOR—The swinging or sliding partition between openings in a building or to close the area within a cupboard or closet. **Rough framing, 66; Metal access, 115; Metal residence, 120; Details of, 166; Types, 166; Flush, 171; Steel sliding, 171; Panel, 171; Stock styles and sizes, 180, 194, 198, 200, 205, 210.**

DOOR CHECK OR CLOSER—A device attached to a door and the door frame which contains a spring for closing the door as well as a compression chamber and a cylinder by means of which the door is prevented from slamming. **Details of, 284.**

DOOR FRAME, EXTERIOR—The enclosing woodwork of an exterior door opening into which the door fits and swings. **Details of, 214.**

DOOR HOLDER—A device used for fastening a door in open position.

DOOR JAMB, INTERIOR—The surrounding case into which and out of which the door opens and shuts. Consists of two upright pieces called jambs and a head fixed together. **House cross-section, 62, 171.**

DOOR PULL—A handle, commonly mounted on a plate, designed for attachment to a door to facilitate opening and closing. See Hardware,

DOOR STOP—A moulding planted on the face of door jambs to stop the door. Also, a small post, usually rubber-tipped, placed to prevent the door from swinging into walls. See Hardware

DOOR TRIM—The casing used around the interior door opening to cover the opening between the door jamb and the rough framing of the doorway. **House cross-section, 62; Details of, 171.**

DORMER—An internal recess in a house, the framing of which projects from a sloping roof. The common types are the hip, lift, gable, and eyebrow dormer. **Details of, 68.**

DOUBLE ACTING BUTT—A butt hinge that permits a door to swing in either direction. **Details of, 284.**

DOUBLE ACTING SPRING HINGE—A hinge with two sets of springs with tension in opposite directions so as to move the door to the closed position, but at the same time permitting its action in either direction. **Details of, 284.**

DOUBLE GLAZING—Windows or doors with a double glass pane, with an air space between them, hermetically sealed to provide insulation. **Description of, 329; How made, 329; Uses, 330; Sizes, 330; Insulation factors, 330.**

DOUBLE-HUNG WINDOW—A window with two sash that are balanced by one of a number of balancing devices, springs, sash weights and cord, etc. **Types, 145; Details of, 146; Installation diagram, 148.**

DOUBLE STRENGTH GLASS—Glass that runs from 8 to 10 thickness to one inch. Also called double-thick glass. **Details of, 332; Types, 332; Uses, 337; Cutting and installation, 337.**

DOWEL—A dowel is a short round pin which makes a joint between two pieces of wood by being inserted into adjacent holes in each piece. Glue is usually used for holding, but sometimes a small cross pin is inserted through the dowel

DOWNSPOUT—A pipe, usually of metal, for carrying rain water from roof-gutters. See Conductors. **House cross-section, 62; Details of, 127; Estimating, 127.**

DRAIN TILE—See Field Tile.

DRESSED LUMBER—See Lumber, Surfaced.

DRESSED AND MATCHED—Boards or plank machined in such a manner that there is a groove on one edge and a corresponding tongue on the other. Also called tongued and grooved. In addition D & M lumber is surfaced smooth. **Standard sizes of boards, 54, 56; For subfloor and sheathing, 72; Hardwood flooring, 379, 380; Wood siding, 424.**

DRIP—(a) A member of a cornice or other horizontal exterior finish course which has a projection beyond the other parts for throwing off water. (b) A groove in the outer side of a sill to cause water to drop off on the outer edge, instead of drawing back and running down the face of the building. **Details of, 220; Applied with wood siding, 424.**

DRIP CAP—A moulding placed on the exterior topside of a door or window to cause water to run off on the outside of the frame. **Details and sizes, 220.**

DROP KEY PLATE—A key plate with a swinging cover to protect the keyhole.

DROP SIDING—See Siding, Drop.

DRY KILN—See Kiln.

DRY ROT—A term loosely applied to many types of decay in lumber, but especially to that which, when in an advanced stage, permits the wood to be easily crushed to a dry powder. The term is actually a misnomer for any decay, since all fungi require considerable moisture for growth, and the wood must have been moist at the time the "dry rot" occurred. **Resistance of wood to decay, 56; Prevention by treating, 76.**

DRY WALL CONSTRUCTION—See Construction, Dry Wall.

DUCTS—In a house, round or rectangular pipe for distribution of warm air from the heating plant to the rooms, or air from a conditioning plant. **Aluminum, 120; Use with hot air heating systems, 453-455.**

DUPLEX LOCKS—A cylinder-type master key lock, with two cylinders, both of which control the same bolt, but one working with a change key and the other with a master key designed to control a series of such locks. **Details of, 282.**

EAVES—The margin or lower part of a roof projecting over the wall. **House cross-section, In cornice measurement, 74; House cross-section, 62; Metal eave drip, 122.**

EAVE TROUGH—See Gutter.

EDGE-GRAINED LUMBER—Lumber that is sawed in such a manner that the annual growth rings meet the surface at approximately a right angle, but not less than a 45 degree angle; as opposed to flat-grained, quarter-sawed, etc. **Diagram of, 52.**

ELBOW CATCH—A lock commonly used for cupboard doors. One end has a hook to engage a staple or strike, and the other end bent at a right angle to provide a means of releasing the catch. See Hardware.

ELECTRICAL EQUIPMENT—Those articles of equipment that are driven or actuated by electricity. **Details of, 343-345; Kitchen, 485; Fixtures, 344; Appliances, 345.**

ELECTRIC MOULDING—A moulding run with a groove on the under side to cover electric wire or cable.

ELEVATION—A scale drawing of the upright parts of a structure.

ENGAGED COLUMN—A vertical feature in the form of a column, with but a portion of it projecting from the wall and supporting the entablature.

ESCUTCHEON—In builder's hardware, the plate containing the keyhole.

EXPANSION JOINT—A bituminous fiber strip used to separate blocks or units of concrete to prevent cracking due to expansion with temperature changes. **Uses, 535; Application, 535.**

EXTENSION BOLT—A flush bolt with a short plate and knob or thumbpiece, the latter connected to the bolt end at top or bottom of door with an extension rod inserted in a hole bored in door.

FACE—The outside or finishing surface of any plane area, as the face of plywood, lumber ,tile, etc. **Plywood, 101.**

FACE BRICK—Brick that are made by putting them under high pressure before they are burned in order to eliminate all air spaces; also called pressed brick. **Details of, 541.**

FACED WALL—A wall in which the masonry facing and backing are so bonded as to exert common action under the load. **Details of, 541.**

FACE MEASURE—The measurement across the face of any wood part exclusive of any solid mould or rabbet. The width of any piece of lumber not including the tongue or lap.

FACE PUTTY—Putty formed in the angle of a sash after the glass has been laid in the rabbet. See Putty.

FACTOR OF SAFETY—The ratio of the ulimate strength of a material to its working stress.

FACTORY LUMBER—See Shop Lumber. **Classification of, 54.**

FARM BUILDINGS—Those structures constructed on farms and used in connection with the pursuit of agriculture. **Laminated framing for, 78; Use of treated lumber in, 76; Insulating board for, 347; Asbestos cement board for, 358; Animal houses, 547; Insulation of, 553; Ventilation of, 556; Prefabricated, 558.**

FASCIA—A board used in cornice construction, usually nailed to the ends of the lookouts. **Details of, 74.**

FAST JOINT BUTT—A hinge with the pin riveted or otherwise fastened permanently to the two parts of the hinge. **Details of, 284.**

FEATHER—A small strip of wood inserted in the grooved edge of two pieces of board or plank to make a joint. **Use in re-roofing, 410.**

FELT—Material used for soundproofing, usually in the form of paper made of hair, wool, etc. See Building Paper.

FENCING—Material used to enclose a field, yard, or other open area. **Ornamental, 122; Barbed wire, 550; All purpose, 550; Poultry, 550; Welded wire, 550; Decorative, 463.**

FIBER BOARD—An artificial board made of fiber and other materials, composition board, etc. **Sheathing, 72; How made, 347; Sizes, 350; Application, 350.**

FIELD TILE—Porous tile placed around the outside of a foundation to absorb excess water and prevent seepage through the walls. Also called drain tile, it is also used extensively to drain areas of land. **Around basement wall, 62; Details of, 544; Illustration of, 544.**

FINISH PLASTER—Last and final coat of plaster. Used as a base for decoration. **Details of, 517.**

FINISH HARDWARE—All exposed hardware in a house, such as door hinges and locks, clothes hangers, etc. See Hardware, Finish.

FINISHING NAIL—A nail made especially for use in finishing. It has a small, smooth head and is a little smaller than a casing nail. **Details of, 295, 296, 298.**

FINISH LUMBER—Finishing material lumber used especially for interior finish. **Details of, 52.**

FINISH SIZE—The measurement of any wood part over all, including the solid mould or rabbet. **Standard measurements, 56.**

FIRE BRICK—See Brick, Fire.

FIRE DOOR—A door construction, consisting of door, frame, hardware, and sill, which under standard fire tests meets the requirements for the location in which it is to be used.

FIREPLACES—See 469-482.

FIREPLACE, OUTDOOR—Metal assemblies that are combined with masonry to form an outdoor cooking unit. **Details of, 484.**

FIREPLACES, CIRCULATOR—Steel plates shaped into the form of the interior of a fireplace, also including air chambers, designed to pass cold air over its hot surfaces and throw it heated back into the room. The steel form is bricked in like an ordinary fireplace. **House cross-section, 62; Sizes and specifications, 116, 482; Illustration of, 482; Cross-section, 484.**

FIREPROOFING—Making wood or other material resistant to fire to a degree that makes it difficult to ignite and keeps it from supporting its own combustion. **Types of, 76; Degree of resistance, 76; Uses of, 76.**

FIRE RESISTIVE—In the absence of a specific ruling by the authority having jurisdiction, applies to materials for construction not combustible in the temperatures of ordinary fires and which will withstand such fires without serious impairment of their usefulness for at least one hour. **Fireproof lumber, 76.**

FIRE STOP—A block of wood or other material placed between joist or in walls to obstruct the spread of fire. Fire stops are usually of the same dimension material as the outside studding. **Construction details, 62.**

FIRE WALL—A wall which subdivides a building to restrict the spread of fire, beginning at the foundation and extending continuously through all stories to and above the roof.

FIRST COAT—In plastering, the first coat of plastering that is put on the scratch coat. In painting, the first coat of paint; the primer. **Details of, 517.**

FLAGSTONE—Flat stones, from one to four inches thick, used for rustic walks, steps, porch floors, etc. Usually sold by the ton.

FLASHING—Strips of metal or other material, worked into roof joints, in valleys, around chimneys, dormers, etc. to prevent leaking at these points. **House cross-section, 62; Sheet metal, 122; Copper, 124; Illustration of, 124; Application of, 124; Around chimney, 406; Illustration, 406.**

FLAT ARCH—The top of an opening formed by bricks or other material, the bottoms of which are set in a horizontal line.

FLAT-GRAINED LUMBER—Lumber on which the annual rings show on the surface flat in various degrees, but all below the 45 degree angle.

FLIGHT—(Of stairs)—A series of connected steps leading from floor to floor of a building. The "flight" is the complete assembly and may consist of two or more "runs" and include all rail, baluster, brackets, etc., according to plans. **Construction details, 62; Nomenclature of parts, 171.**

FLITCH—A thick piece of lumber with wane (bark) on one or more edges. **Facing hardwood plywood, 108.**

FLOATING—Equal spreading of plaster on the surfaces of walls by means of a float. Only rough plaster is floated. **Illustration of, 518.**

FLOATING PARTITION—One which rests on a floor between two joists parallel to them.

FLOORING—A wide range of materials used as the finished surface of floors. (a) Hardwood flooring, made in several styles from oak, maple, beech, birch, pecan, etc. is applied over a sub-floor. (b) Softwood flooring is usually applied directly upon joists, without a sub-floor. Most common species of softwood flooring are yellow pine and fir. (c) Rubber, asphalt, cork, and other composition tiles are applied with mastics, as is linoleum. **House cross-section, 62; Hardwood, 379; Asphalt tile, 388; Cork tile, 390; Rubber tile, 390; Linoleum, 390; In kitchens, 392; Types and applications, 379-392.**

FLOORING NAIL—A nail made especially for nailing flooring, resembling a casing nail. **Table of quantity, 295; Application of, 382.**

FLOORING, PORCH—Any softwood that is durable and that can withstand weather is suitable for porch flooring. Flat-grain may be used, as well as 25/32" x 4" in either edge-grain or flat. Porch joists should run parallel to the front of the house so the flooring strips, laid across them, will drain away from the house. **How to figure, 52.**

FLOOR OPENING—An opening cut out and framed in a floor, such as a stair well or opening for chimney. **Construction details, 62.**

FLOOR LINING—A layer of paper, felt, or similar material placed between the sub-floor and the finish floor. Sometimes used erroneously to refer to the sub-floor. See Building Paper, Felt.

FLUE—The space or passage in a chimney through which smoke, gas or fumes ascend. Each passage is called a flue, which together and including the surrounding masonry make up the chimney. **Clean out door, 115; For chimney, 456, 470; Sizes and specifications, 544.**

FLUE LINING—Fire clay or terra cotta pipe, round or square, made in all of the standard flue sizes, and in two foot lengths, used for the inner lining of chimneys with the brick or masonry work around the outside. Flue lining should run from the concrete footing to the top of the chimney cap. Figure a foot of lining for each foot of chimney. **Cross-section drawing of, 482; Details, 544.**

FLUSH DOOR—The name given to that type of door which has an absolutely plane surface from edge to edge. They are often ornamented by the cutting of grooves and by the planting on of small mouldings, but the name sticks because the basic flush door is of a construction different from other types and the variation in design is not enough to affect its individuality. The door was originally designed for use in hospitals because the plane flat surface contributed to the hygienic idea, but its popularity has broadened so that it is now found in practically every type of building. **Details of, 171; Illustration of, 178; Sizes, 180, 194, 198, 200, 205, 210.**

FLUSH MOULD—An applied moulding which finishes flush with or below the face or surface of stiles or rails.

FLUSH PLATE—A door plate of any type made to set into the wood or other material flush with the face of the door.

FOOT BOLT—A bolt designed for attachment to the bottom of a door. Usually the bolt is controlled by a trigger which holds the bolt against a spring, and release of the trigger permits the spring to move the bolt into locking position. See Hardware.

FOOTING—The spreading concrete course or courses at the base and upon which a wall rests. **House cross-section, 62.**

FORK LIFT TRUCK—See Materials Handling Equipment.

FORM LUMBER—In form building, lumber used for building forms; also lumber that has been used for concrete forms. See Plywood. **Classification, 52, 54; Exterior grade plywood, 102.**

FOUNDATION—The entire masonry sub-structure below the first story floor or frame of a building, including the footing upon which the building rests. **Concrete wall, 62; Ventilators, 116.**

FRAME—A frame is a group of lumber pieces so shaped and assembled as to form an enclosure for a door, window, or sash. The essential parts of the group are the jambs (head and side) and the sill.

Also, the term used to define a house whose sub-structure is built of lumber. See, Construction—Frame. **Details of, 60-70; Illustration, 62; Window and door, 218.**

FRAMING—The act of putting together a frame, or of constructing anything that requires a frame; also the materials for framing. **Details of wood framing, 60, 70; House cross-section, 62; Wood laminated, 78; With framing anchors, 118; Entrance door, 166.**

FRAME PULLEY—A box containing a sheave and designed for installation in a window frame to carry the sash cord. **Details, 146.**

FRAMING ANCHORS—A specially shaped and fabricated metal device used to facilitate the installation of, and to add strength to rafters and studs to plates, and to headers and cripples to studs. **Details of, 118; Illustration of, 118.**

FRAMING, BALLOON—A system of framing a building in which all vertical structural elements of the bearing walls and partitions consist of single pieces extending from the top of the sole plate to the roof plate. **Principles of, 66.**

FRAMING, BRACED—A system of framing a building in which all vertical structural elements of the bearing walls and partitions, except the corner posts, extend for one story only, starting at the foundation sill for the first story framing and at the top plate of the story below for all stories above the first. Corner posts extend from foundation sill to roof plate and are braced diagonally. **House construction details, 60, 70.**

FRAMING, PLATFORM—A system of framing a building on which floor joists of each story rest on top plates of the story below—on the foundation sill for the first story—and the bearing walls and partitions rest on the sub-floor of each story. **Details of, 60, 70.**

FRENCH DOORS—A glazed door without panels and having the glass opening divided into a number of small lights. Originally the name applied to a door without wood panels and with unusually narrow stiles and rails. The number of lights had no bearing on the name. **Details of, 194, 198.**

FRIEZE—A board forming a band immediately below the cornice. **Details of, 74; House cross-section, 62.**

FRONT DOOR LOCK—A lock designed for use on entrance doors. Usually contains a deadbolt and a latchbolt, with the deadbolt controlled from the outside by a key and from the inside by a knob or key; the latchbolt is controlled by a key on the outside and by a knob on the inside. There is also usually a "top work" whereby the outside knob may be used to move the latchbolt, if that is desired. See Hardware, **282.**

FURRING—Strips of wood or metal applied to a wall or other surface to even it, to provide an air space or to give it a thickened appearance, usually as a base for the application of some type of wall covering. **Details of, 74; Estimating, 74; House cross-section, 62; Application of insulating board, 350; Insulating board plank, 348; Tileboard, 350; Gypsum board, 362; Fibreboard, 362; Wood shingles, 416; Siding, 420.**

GABLE—The vertical triangular portion of the end of a building from the level of the plate to the ridge of the roof. Also a similar end, when not triangular in shape, as of a gambrel roof or the like. **Details of, 405, 406.**

GABLE END—An end-wall having a gable. **Framing of, 68; House cross-section, 62.**

GABLE ROOF—A double-pitch roof; a comb roof; a double-sloping roof. **Figuring area of, 405.**

GABLE STUDDING—The upright scantlings of a gable; the studding used in gable ends. **Details of, 66; House cross-section, 62.**

GALVANIZED—The term used to define a type of treatment given to certain irons and steels in the manufacturing process that makes them resistant to weather. **Area walls, 115; Roofing, 122; Painting, 258; Screening, 290.**

GAMBREL ROOF—A roof, the lower half of which is steep, while the upper half is rather flat; a curb roof. **Figuring areas of, 405.**

GANG BOX—See Junction box.

GARAGE DOOR—The sliding, folding, or tilt-up door for a garage. Manufactured as complete units ready for installation, including all hardware and accessories. **House cross-section, 62; Types, 505; Equipment, 505; Installation data, 510.**

GARAGE DOOR HARDWARE—Specially designed hardware to actuate and secure garage doors. **Details of, 286.**

GARDEN EQUIPMENT—See page 463 for a complete description.

GAUGED MORTAR—In plastering mortar is said to be gauged when mixed with plaster of Paris, which makes it set faster. **Details of, 518.**

GAUGING PLASTER—A plaster mixed with finish lime to make the lime putty for the finish coat of plaster. It determines the proper setting time and initial strength of the lime putty. Six sacks of finish lime and one sack of gauging plaster (100 pounds) are required to cover 100 square yards. Mixture, 3 parts lime putty to one part gauging plaster. **Details of, 518.**

GIRDER—Same as beam. Where beams of different sizes are used in the same structure, the main beams only are termed girders. Girders may be either solid or built-up. **Table of maximum spans, 60; Illustration of, 60; House cross-section, 62; Metal, 122.**

GIRDER SUPPORTS OR GIRDER POSTS—Columns placed so as to support girders or beams. **House cross-section, 62; metal adjustable, 115; steel, 116.**

GIRT—One of the horizontal members on the frame of a building or other structure, located between the sill and the plate, to which vertical sheating or other covering is attached. **Housing construction details, 60, 70.**

GIRTH—A term used to designate the lateral dimension of cornice work, mouldings, gutters, columns, etc.

GLASS—A substance formed by the fusion of silica with two or more metallic oxides. A mixture of fine sand with soda or potash and lime, or lead oxide, is used most commonly. Used for window and door panes, blocks, tile, etc. in the building field. **Pane sizes in stock windows, 159, 162; Flat glass, 321; Specifications, 321; Plate, 322; Tempered plate, 324; Mirrors, 324; Double glazed units, 329; Structural, 330; Patterned, 340; Wire, 332; Laminated Safety, 332; Package selling, 505.**

GLASS BLOCK—Brick made of glass, usually obscured or diffused glass that will transmit light but prevents visibility. See Block, Glass. **Details of, 337; Quantity table, 337; Mortar for, 338.**

GLASS WOOL INSULATION—See Blanket Insulation, Batt Insulation.

GLAZING—The placing of glass in the frames of windows of doors. See Putty. **Table of pane sizes, 159, 162; How to glaze a window, 338.**

GLAZING COMPOUND—A putty-like substance used to hold window lights in a sash or door. It retains its pliability and resistance to drying over prolonged periods of service. **Details of, 338.**

GLAZING, DOUBLE—See Double Glazing.

GLAZING, PLASTIC—A translucent sheet material, with an integral mesh of fiber or wire, used to cover window and door openings in farm buildings, and as storm protection coverings in other types of structures. Also used in greenhouses and hotbeds. **Details of, 338; Illustration of, 338.**

GLUE—A term applied to a wide range of adhesives, but most commonly denotes a hot or cold animal glue. Also could include vegetable and resinous compounds, as well as mastics and adhesives of all types. See Adhesives, Mastics. **In wood laminates, 78; In plywood, 101.**

GRADE—Degree of height; level. In lumber any of the quality classes into which lumber is segregated for marketing and use purposes. **Details of, 50; Plywood, 101, 102.**

GRADE LINE—The level of ground at the building. **House cross-section, 62.**

GRADIENT—The degree of inclination of a surface, road, or pipe, usually expressed in percent.

GRADING, RULES—The series of rules governing commercial and structural lumber species that determine quality and price. Applies also to plywood. **Classification table, 54.**

GRAIN—The direction, size, arrangement, appearance, or quality of the fibers in wood. **Diagram of, 52.**

GRAIN, CLOSE—Lumber with narrow and inconspicuous annual rings. The term is sometimes used to designate wood having small and closely spaced pores, but in this sense the term "fine textured" is more often used. **Diagram of, 52.**

GRAIN, COARSE—Lumber with wide and conspicuous annual rings in which there is considerable difference between springwood and summerwood. The term is also used to designate wood with large pores, but in this sense the term "coarse textured" is more often used. **Diagram, 52.**

GRAIN, CROSS—Lumber in which the cells or fibers do not run parallel with the axis or sides of a piece. **Diagram, 52.**

GRAIN, DIAGONAL—Annual rings at an angle with the axis of a piece as a result of sawing at an angle with the bark of the tree. **Diagram, 52.**

GRAIN, EDGE (VERTICAL)—Lumber in which the rings or grain form an angle of 45 degrees or more with the surface of the piece. **Diagram, 52; Cedar shingles, 416.**

GRAIN, FLAT—Lumber in which the rings form an angle of less than 45 degrees with the surface of the piece. **Diagram, 52.**

GRAIN, INTERLOCKED—Wood in which the fibers are inclined in one direction in a number of rings of annual growth, then gradually reverse and are inclined in an opposite direction in succeeding growth rings, then reverse again. **Diagram, 52.**

GRAIN, OPEN—Common classification of painters for wood with large pores, also known as "coarse-textured." **Diagram, 52.**

GRAIN, PLAIN SAWN—Another term for flat grain, and used generally in hardwoods. **Diagram, 52; Oak flooring, 379, 380.**

GRAIN, QUARTER SAWN—Another term for edge grain, and used generally in hardwoods. **Diagram, 52; Oak flooring, 379, 380.**

GRAIN, SPIRAL—A type of growth in which the fibers take a spiral course about the bole of a tree instead of the normal vertical course. The spiral may extend right handed or left handed around the tree trunk.

GRAIN, VERTICAL—Another term for edge grain.

GRAIN, WAVY—Wood in which the fibers collectively take the form of waves or undulations.

GREASE TRAP—Where septic tanks are used, water from the kitchen and laundry can be taken from the house in a special line into a grease trap where the grease settles to the bottom and the water runs off. Where grease hinders the chemical action of a septic tank, the water from the trap may by-pass the septic tank and connect into the drain field beyond it.

GRILL—Term applied to open iron work generally, but literally an iron grating. Also, the unit-type iron assembly for outdoor cooking. **Details of, 118.**

GROUNDS—Strips of wood of same thickness as lath and plaster which are attached to walls before the plastering is done. Used around windows, doors and other openings as a plaster stop and in other places for attaching base boards or other trim. Grounds should be 7/8 inch wide and thickness of lath and plaster. Estimate a single strip around all window and door openings which receive trim, and for base. **Details of, 72; Estimating, 72.**

GROUT—A thin coarse mortar, used for pouring into the joints of stone and brick work.

GROWTH RINGS—In lumber, rings of darker grain in a log, a certain amount of which is added each year. The width of a growth ring indicates the extent of growth of the tree during the year. **Diagram of, 52; As a factor of density and strength, 54.**

GUTTER OR EAVE TROUGH—A shallow channel or conduit set below and along the eaves of a house to catch and carry off rain water from the roof. On ordinary dwellings 4-inch gutter is used. Gutter required will be about two feet more than the perimeter of the main cornice on an average house with hanger strips every four feet. **House cross section, 62; Details of, 127; Estimating, 127.**

GYPSUM—A hydrous calcium sulphate rock, colorless when pure, which is the raw material from which plaster of Paris or stucco is made. **Use in plaster board, 362; Lath, 362; Sheathing, 362; Wallboard, 362; In plaster composition, 517.**

GYPSUM BOARD—See Plaster Board.

GYPSUM LATH—A panel product made with a core of gypsum between two outside layers of tough, durable, paper. **Specifications of, 362; Details of, 520; Types, 520; application, 525.**

GYPSUM SHEATHING—A gypsum board product designed for use as a sheathing material. **Details and specifications, 362; Application, 362.**

GYPSUM WALLBOARD—Panels of gypsum board used for interior wall covering. Used in place of lath and plaster, the process is known as dry-wall construction. **Details of, 362; Types, 362; Uses, 362; Application, 362; Decorating and finishing, 362; Estimating, 362.**

H COLUMNS—Steel girders that form the letter H in cross-section, used as girders in construction. Also called I beams. **Details of, 122.**

HALF-MONITOR ROOF—A roof having one side of the roof elevated several feet above the other side, for ventilating and lighting purposes.

HALF-ROUND—A moulding whose cross section is a half-circle or 180 degrees. **See Mouldings, 220.**

HAND TOOL—A tool operated manually. See Tools. **Details of, 559-562; For home maintenance, 562; Care of, 562; Selection of inventory, 562; Garden, 463.**

HARDBOARD—Insulation board compressed into a thin, hard board 1/8", 3/16", 1/4", and 5/16" thick. Has a wide variety of uses in construction and manufacture. Some are manufactured with a tough lacquered surface simulating ceramic tile. Known as prefinished hardboards, these products are used as wall finishes where such a surface is desired. **Details of, 366; Sizes, 366; Grades, 366; Uses, 366; Tempered, 366; Uses, 366; Finishing, 366; Prefinished, 368.**

HARDWARE, FINISH—All hardware that is exposed in a house such as door knobs, door hinges, locks, clothes hooks, etc. **Types of, 279; Finishes of, 280; Locks, 280; Keys, 284; Hinges, 284; Door closers, 284; Garage door, 286; Casement window, 286; Cabinet, 286; Accessory, 286; Forged iron, 286; Sliding door, 290; Wire screening, 290; Plastic screening, 292; Ladders, 292; Nails, screws, bolts, 295-298; Special fasteners, 292; Garage door, package selling, 505.**

HARDWARE, ROUGH—All hardware that is concealed in a the construction. **Types of, 115-128; Nails, 295-298.**

HARDWOOD—The botanical group of trees that are broad-leaved. The term has no reference to the actual hardness of the wood. **Classification of, 49; Density of, 52; Plywood, 101; Package selling, 505.**

HARDWOOD FLOOR—Flooring made of hard wood, as oak, maple, beech, birch, pecan, and other hardwoods. See Flooring. **Details of, 379; Oak, 379; Maple, 379; Beech, 379; Birch, 379; Pecan, 379; Strip, 379; Plank, 379; Block, 380; Prefinished, 380; Grading, 380; Storing and handling, 382; Laying, 382; Estimating, 384; Finishing, 384, 386; Rental of sanders, 386.**

HARDWOOD PLYWOOD—A plywood which has hardwood faces or outside layers. The interior layers, or core, need not be hardwood. **Types of, 102; How varying figure is obtained in veneer, 102; Stock sizes, 108; Special overlays, 108; Package selling, 505.**

HEAD CASING—A finishing board over an opening. **Window, 146; Details and sizes, 224.**

HEADER—(a) One or more pieces of lumber used generally around openings, to support free ends of floor joists or to support the free ends of short joists, studs or rafters and transfer their load to other parallel joists, studs or rafters.

(b) A wood lintel. (c) In masonry, stones or bricks extending over the thickness of a wall, or the end of a brick showing on the face of a wall in horizontal position. **Header joists, 60; Floor joists, 64; Illustration of, 64; Door, 66; Spans of, 66; House cross-section, 62.**

HEADWAY—Also Headroom. The amount of clear space to permit free passage over a stairway or under an arch. **Estimating in stair run, 214.**

HEART WOOD—In lumber, the inner part of the living tree through which sap does not flow. Usually darker in color than the sapwood which surrounds it. **As a factor in strength, 54; Resistance to decay, 58; In cedar shingles, 412.**

HEARTH—The fireproof part around the front of a fireplace. **House cross-section, 62.**

HEATING SYSTEM—The installation consisting of a furnace or other heat generator and leads or pipes that conduct hot air, hot water, or steam to the areas to be heated. **Gravity warm air, 453; Forced warm air, 453; Gravity hot water, 453; Forced Hot water; one and two pipe hot water, 454; Panel, 454; Baseboard, 455; Wall, 456; Space, 456.**

HEEL—The end or foot of a rafter that rests upon the wall plate. **Details of notched type, 68.**

HINGE—Two jointed plates, one of which is attached to a door and the other attached to the door frame to support the door and enable it to swing open and shut. **Types of, 284; Illustration of, 284.**

HINGE STRAP—A plate, usually ornamented, designed to be placed on the surface of a door, with one end against the knuckle of a butt to give the appearance of a strap hinge.

HIP—The external angle formed by the meeting of two sloping sides of a roof. **Details of, 68; Flashing, 124; Illustration of, 406.**

HIP AND VALLEY ROOF—A roof with hips and valleys. **Illustration of, 68; Details of, 70; Flashing, 124; Figuring area of, 406.**

HIP RAFTER—The corner rafter of a hip roof. **Details of, 68.**

HIP ROLL—An ornamental strip of metal, composition roofing, tile or wood to finish and cover a hip. **Details of, 68, 406.**

HIP ROOF—A roof which rises by equally inclined planes from all four sides of a building. See Roofs. **Illustration of, 54, 406.**

HOLLOW TILE—Blocks made of clay, baked, having hollow cavities. Used in construction to build rough walls, also as bridging for fireproof floor slabs. **Details of, 544.**

HOOD—A caplike projection over casement windows to provide more protection than an ordinary drip cap. Also a small roof over an entrance.

HORIZONTAL LOCK—A lock with the major dimension along a horizontal line. **Illustration of, 280, 282.**

HORSE—A carriage in stair building, sometimes called rough stringer. A trestle, sawhorse.

HOUSED—Grained or routed so as to receive the full-size member, as a stringer being housed for the risers and treads in stair building. A joint is housed when one member is routed to receive the other.

HOUSED STAIR—A stair that is housed both for the risers and for the treads.

HOUSED STRINGER—A stringer that is housed both for the risers and for the treads.

I-BEAM—A steel beam with a cross-section resembling the letter "I." **Details of, 122.**

INCINERATOR—A furnace or apparatus for burning trash, garbage, and other refuse. **Home type, illustration of, 128; Details of, 461; Package selling, 505.**

INCLOSURE WALL—An interior, non-bearing wall in skeleton construction anchored to columns, piers or floors, but not necessarily built between columns or piers.

INSIDE TRIM—The finishing for the inside of a building; the finishing around openings; also called casing, trim, finish. **Metal, 127, 224; Wood, 218, 224.**

INSULATING AGGREGATES—Combinations of expanded vermiculite, perlite, or similar light-weight insulating material with cement or plaster, and used as a construction material as well as an insulation. **Types, 442; Perlite plaster, 520; Vermiculite plaster, 520; In concrete, 534.**

INSULATING BOARD—Made by reducing wood, cane or other vegetable fibers to a pulp and then reassembling the fibers into large sheets or boards. The insulating value comes from the millions of tiny air spaces within and between the fibers. **How made, 347; Uses, 347; Nailing data, 348; Storing and handling, 348; Board plank, 348; Tileboard, 350; Application, 350; Asbestos cement, 358; Gypsum, 362; Hardboard, 366; Laminated fibre board, 368.**

INSULATING BOARD LATH—Units are four feet long, in a variety of widths ½-inch and 1-inch thick. Made with special joints for reinforcing the plaster at the joints. **Details of, 525.**

INSULATING BOARD PLANK—Long, narrow units produced in several widths and a variety of lengths. The long edges are usually beveled and may also be obtained with a narrow groove which produces a bead adjacent to each bevel. May be applied vertically or horizontally depending on effect desired. **Details of, 348; Application of, 348; Specifications, 350.**

INSULATING BOARD SHEATHING—May be used as the base for any type of exterior surface treatment. Waterproofed with asphalt. Standard thickness is 25/32 inch, but is available in ½ inch. Made in large sheets of varied dimensions. **In frame construction, 70; Details of, 350; Application, 352; Specifications, 352.**

INSULATING TILEBOARD—Made from the same basic stock as insulating board in smaller square and rectangular patterns. Edges usually are beveled. Used most frequently for ceilings. **Details of, 350; Sizes, 350; Colors, 350; Application, 350.**

INSULATION—Any material which when placed in the walls, ceilings or floors of a structure, will retard the penetration of cold in winter and heat in summer. **House cross-section, 62; Insulating board, 347-356; Advantages of, 435; Use, 436; Technical ratings, 436; Vapor barriers, 436; With ventilating systems, 436; Blanket, 436; Batts, 438; Loose fill, 438; Vermiculite, 440; Perlite, 440; Aggregates, 442; Reflective, 442; Estimating, 447; Package selling, 505.**

INSULATION, BATT—See Batt Insulation.

INSULATION, BLANKET—See Blanket Insulation.

INSULATION, LOOSE FILL—See Loose Fill Insulation.

INSULATION, REFLECTIVE—See Reflective Insulation.

INVENTORY—The merchandise held in stock ready for sale. In money, the amount a business has expended for goods that have been delivered and are held in stock. **Records of, 596, 597.**

JACK RAFTER—A rafter which reaches from the wall plate to a hip, or from a valley to a ridge. **Details of, 68; Illustration, 68.**

JALOUSIE—Windows and doors with a series of horizontally pivoted panes like a louvre. Also called awning windows and doors. **Details of, 148; Illustration, 166.**

JAMBS—That part of any frame, either window or door, which surrounds and contacts the thing which the frame is intended to support. There are always two side jambs and a head jamb in every frame (except in Gothic frames, where no head jamb is indicated, and in Peak head frames, where there are two), and all stops are fastened to the jambs. **House cross-section, 62; Window, 146; Inside door, 146; Installation of unit type windows, 148.**

JOINT—The space between the adjacent surfaces of two members or components joined and held together by nails, glue, cement, mortar or other means. **Metal strip, 118.**

JOINTS, EXPANSION—See Expansion Joints.

JOINT TAPE—A tape for covering the joints of various kinds of wall board to make the joint line invisible. **Use with gypsum wallboard, 362.**

JOIST—The framing member used to support floors and ceilings. All horizontal framing members between sills or plates that tie a building together laterally and form a support for a floor or ceiling. **Density of, 52; Floor joists, 60; Illustration of, 60; Trimmer, 60; Sizes of, 64; Estimating, 64; House cross-section, 62; Precast masonry, 544.**

JOIST ANGLE—3"x3"x3/16" steel angles, used in place of hangers in the framing of headers and trimmers. **Details of, 118.**

JOIST HANGERS—(Stirrups) When joists are to be laid flush with the girder they are secured to the girder by means of a specially formed iron strap. **Details of, 118.**

JUNCTION BOX—In electrical wiring, a metal box where the direction of a wiring circuit is changed. **Details of, 344.**

ALUMINUM WINDOWS—Windows, usually the unit type, made of aluminum. **Details of, 122, 146, 148, 166.**

KEY—A specially formed and notched metal bit used to contact the tumblers or discs of a lock to secure or open it. **Details of, 282.**

KEY—In plastering, the spreading of the plaster material back of the lath which forms an anchorage. Also called clinch. In masonry, a wedge used for breaking stone or for making joints. **Details of, 517.**

KILN—An oven-like structure used for the drying of lumber. Control of temperatures and humidity make possible the regulated drying of lumber in a shorter period of time, and to a lower moisture content, than is possible in air drying. **Illustration of, 56; Use of, 56; Forced circulation, 578; Direct heated, 578; Unit package, 578; Natural draft, 578; Illustration of, 578.**

KILN-DRIED—See Lumber, Kiln Dried.

KITCHEN—A room equipped for the preparation and storage of food, also the storage and cleaning of tableware. **Layout of, 485-486; Installation data, 490; Package selling, 505.**

KNEE WALL—A partition of varying length used to support the roof rafters when their span is too long. **Details of, 66.**

KNOB LOCK—A lock for a door with both a spring bolt, operated by the knob; and a dead bolt, operated by a key. See Hardware.

KNOCK DOWN—Any article of millwork which is manufac-

tured to the extent of the completion of all machine work and delivered to the customer in that condition without being put together or nailed up.

KNOT—In lumber, a branch or limb, embedded in the tree which has been cut through in the process of lumber manufacture. Knots are classified according to size, form, quality and occurrence. To determine the size of a knot, average maximum length and maximum width unless otherwise specified. **In lumber, 52; Plywood, 101, 102.**

KNUCKLE—That part of a hinge or butt that encloses the hinge pin. **Illustration of, 282.**

LACQUER—An oil or liquid plastic base substance to which is added pigment, used for covering surfaces for protection and decoration. See Paint. **Details of, 255, 256; Finishing hardwood floors, 384.**

LAUNDRY CHUTE—A duct for conveying laundry. **Details of, 118; Illustration of, 128.**

LAG SCREW—A bolt with a square head, and threaded to a point at the other end, used for fastening pieces of wood together, metal to wood, etc. **Types and sizes of, 292; Details of, 116, 122.**

LALLY COLUMN—A steel column or post supporting a girder. **Details of, 116.**

LAMINATED BEAM—A beam that is made of a number of members, held together with glue, nails, bolts, etc. **Details of, 78.**

LAMINATED WOOD—An assembly of wood, with the grain fibers running parallel in each piece, and fastened together with glue. This is in contrast to plywood where grain direction alternates. **Details of, 78; Framing members, 78; How made, 78; Uses, 78; Plastic faced, 108.**

LAMINATED WOOD FIBER BOARD—Details of, 368.

LANDING TREAD—A strip of the same kind of wood and of the same thickness as stair treads, about 4 inches wide, rabbeted on one side to the thickness of the finished floor, and nosed on the face the same as the tread. Used as a finished edge on stair platforms and around stair wells.

LAP—Extending over as roll roofing should lap two inches. the lap bevel siding, shingles. **Correct lap of floor joists, 60; Top plates, 64; Asphalt roofing, 408; Cement, 412; Wood shingles, 416; Bevel, 420, 422.**

LAP SIDING—See Bevel Siding.

LATCH BOLT—In a lock, a bolt with a beveled head moved by a spring when it is retracted in contact with the strike. **Details of, 282.**

LATH—A building material of metal, wood, gypsum or insulation board, fastened to the frame of a building to act as a plaster base. **House cross-section, 62; Illustration of, metal, 118; Board, 520, 525; Wood, 520; Metal, 525, 529.**

LATH NAIL—A small, flat-head nail used for nailing on lath; a 3d nail. See Nails.

LATHE—A machine used for working wood and metal which holds the material and rotates it about a horizontal axis against a tool that shapes it. **Plywood, 101; Home workshop, 559.**

LATTICE—Any work of wood or metal made by crossing strips, rods, or bars to form a network. **Moulding, 218.**

LAUNDRY—In building, a room equipped for washing and drying clothes. **Chutes, 118; Planning and layout, 494, 496; Equipment, 496; Package selling, 505.**

LAWN and GARDEN—Fully described beginning on page 463.

LEADER—A vertical pipe attached to a building to carry water from the roof gutters. See Conductor. **House cross-section, 62; Details of, 127; Estimating, 127.**

LEADER HEAD—An ornamental enlargement at the top of a leader or conductor to receive rain water in large volume at a narrow opening where a gutter is not practical. See Conductor.

LEDGER BOARD—A horizontal board fastened across the uprights of a scaffold parallel to the face of a building. A ribbon, or ribband, is sometimes called a ledger board. **Construction details, 60, 70.**

LEDGER STRIP—A strip of lumber nailed along the bottom of the side of a girder on which joists rest. When joists are to be flush with the top of the girder, they must be notched sufficiently to fit over the ledger strip. Also called ledger plate. **Illustration of, 60.**

LIGHT—Space in a window sash for a single pane of glass. Also a pane of glass. **House cross-section, 62; window, 146; Sizes of in stock windows, 159, 162.**

LIME—Limestone burned to leave calcium oxide or quicklime. The addition of water to quicklime results in chemical changes which create hydrated or slaked lime. A sack of lime weighs 50 pounds and contains 1¼ cubic feet. **In plaster composition, 517; In waterproofing, 536.**

LIME, CEMENT MORTAR—In building, a mortar made of cement having a certain portion of lime in it. Such a mortar is much reduced in strength, but is easier to apply. **Details of, 536.**

LIME, FINISH—Used to make lime putty for the finish plaster coat. **Details of, 518.**

LIME, MASON'S—Used to make mortar for masonry work. **Details of, 536.**

LIME PUTTY—A putty made from slaking lime and allowing water to evaporate, which is then used for skim coating or for white coating. **Details of, 518.**

LINEAL FEET—Measurement in a straight line, running feet. Contrasted with board feet, square feet, cubic feet. **Estimating by, 62; Cornices, 74; As applied to mouldings, 218.**

LINOLEUM—A composition consisting of a mixture of ground cork, wood flour, resins, etc. bonded to a felt or burlap backing, for the covering of floors, table tops, etc. **Types of, 392; Application, 392.**

LINOLEUM TILE—Squares of linoleum used for flooring. **Details of, 392.**

LINSEED OIL—An oil obtained by pressing linseed and used extensively in the manufacture of paint and other paint products. **Details of 255, 256, 262.**

LINTEL—A horizontal member above a window or door opening to provide additional support to the wall above the opening. Usually of metal, wood, or stone. **In framing, 66; Metal, 115.**

LOAD-BEARING WALLS—In building, walls that bear their own as well as other weight; supporting walls; as opposed to curtain walls. **Construction details, 60, 70.**

LOCK SET—A complete lock with all the trim—knobs, escutcheon plates and screws. **Details of, 282, 284.**

LOOKOUTS—Projecting ends of timbers, as the lookouts of a cornice, onto which the finishing boards are nailed. **House cross-section, 62.**

LOOSE FILL INSULATION—Bulk materials made of rock wool, slag wool, glass wool, wood fiber, vermiculite, perlite, etc., supplied in bags, and either poured or blown between insulation. **Types, 438, 440; Application, 438, 440.**

LOOSE JOINT BUTT—A hinge with a single knuckle on each half, one of them with the pin and the other with a corresponding hole, permitting easy separation of the two parts of the butt. **Illustration of, 284.**

LOUVRE OR LOUVER—An opening with a series of horizontal slats so arranged as to permit ventilation but exclude rain, sunlight or vision. For control of attic condensation, louvres should be placed in each gable end. To achieve satisfactory results, the total free area of louvres should be not less than ¼ square inch for every square foot of ceiling area. Also see Attic Ventilators. **Metal, 116; Importance in attic ventilation, 436, 460.**

LUMBER—Lumber is the product of the saw and planing mill not further manufactured than by sawing, resawing, and passing lengthwise through a standard planing mill, crosscutting to length and working. Lumber of thickness not in excess of ¼" to be used for veneering is classified as veneer. **Classification of, 50; Standard sizes, 52; Estimating, 56; Framing details, 60-70; Treated, 76; Laminated, 78.**

LUMBER BOARDS—Yard lumber less than 2 inches thick and 8 or more inches wide. **Classification of, 50, 52; Uses in construction, 60, 70.**

LUMBER DIMENSION—All yard lumber except boards, strips and timbers; that is yard lumber from 2 inches to but not including 5 inches thick, of any width. **Classification of, 50, 52; Standard sizes of, 56; Uses in construction, 60, 70.**

LUMBER, DRESSED SIZE—The dimensions of lumber after planing, usually ⅜" less than the nominal or rough size. For example a 2x4 stud actually measures 1⅝"x3⅝". **Sizes and specifications, 50, 54.**

LUMBER, FACTORY AND SHOP—Lumber intended to be cut up for use in further manufacture. It is graded on the basis of the percentage of the area which will produce a limited

number of cuttings of a specified, or a given minimum, size and quality. **Classification of, 49, 54.**

LUMBER, KILN-DRIED—Lumber dried by artificially controlled heat and humidity to a satisfactory moisture content much faster and better than can be done through the natural process commonly known as air drying or air seasoning. Kiln drying rate depends on thickness and grade of lumber; for example, a piece of 4/4 common is left in the kiln about 48 hours, but a piece of 8/4 select must remain in the kiln about three weeks. **Details of, 56.**

LUMBER, MATCHED—Lumber that is edge dressed and shaped to make a close tongue-and-groove joint at the edges or ends when laid edge-to-edge or end-to-end. See Dressed and Matched. **Definition of, 52; Classification, 52; Sizes, 56.**

LUMBER, NOMINAL SIZE—The ordinary commercial size by which it is known and sold in the market. (See Lumber, Dressed Size.) **Standard sizes, 56.**

LUMBER, PLANK—A broad board, usually more than 1" thick, laid with its wide dimension horizontal and used as a bearing surface. **Classification of, 49; Sizes, 56.**

LUMBER, ROUGH—Lumber undressed as it comes from the saw. **Classification of, 49, 50, 52.**

LUMBER, SHIPLAP—Lumber that is edge dressed to make a close rabbeted or lapped joint. **Standard sizes of boards, 56; As sheathing, 70; Siding, 424.**

LUMBER, STRIPS—Yard lumber less than 2" thick and less than 8" wide. **Classification of, 49, 50.**

LUMBER, SURFACED—Lumber that is dressed by running it through a planer. **Classification of, 49, 50; How to figure board feet, 52.**

LUMBER, TIMBERS—Lumber 5 or more inches in least dimension. **Classification of, 49, 50; Laminated, 78.**

LUMBER, TREATED—A term applied to lumber that has been coated or impregnated with a solution that prevents decay and deterioration even when in direct contact with the earth or when exposed to weather. **Details of, 76; Where to use, 76; General construction, 76; Types of, 76; Package selling, 505.**

LUMBER, WEIGHT—See Weight, Lumber. **As a factor in strength, 54; Relationship to moisture content, 56.**

LUMBER, YARD—Lumber of all sizes and patterns which is intended for general building purposes. The grading of yard lumber is based on the intended use of the particular grade and is applied to each piece with reference to its size and length when graded without consideration to further manufacture. **Classification of, 49, 50.**

MAIL RECEIVERS—A metal chute which connects the inside and outside walls of a house which has a door at each end. **Details of, 118.**

MANSARD ROOF—A roof similar to a gambrel, except that it has hips instead of gables; sometimes called a pavilion roof, French roof. **Illustration of, 405, 406.**

MASONRY—Stone, brick, concrete, hollow tile, concrete block, gypsum block or other similar building units or materials or a combination of same, bonded together with mortar to form a wall, pier, buttress or similar mass. **Details of, 533.**

MASTER KEYED LOCK—A lock which is one of a series, each one of which may be operated by two keys; a master key which will operate all of them, and individual keys which operate individual locks only. **Details of, 282.**

MASTIC—See Adhesives.

MANTEL—The shelf over a fireplace; the finishing on a fireplace. **House cross-section, 62; Stock, 214.**

MATERIALS HANDLING—Pages 579-582.

MECHANICAL HANDLING EQUIPMENT—Specially designed vehicles that move, lift or lower lumber and building products. Fork Lift, Straddle Truck, Conveyors, etc. **Types of, 579, 582; Uses, 579-582; Increased efficiency with, 579.**

MEETING RAIL—The rail that joins the upper and lower sash of a double-hung window; a parting rail. **Illustration of, 146.**

METAL BUILDING PRODUCTS—Those products used in the fabrication and finishing of buildings that are made of metal. **Classifications of, 115; Types of, 115, 116, 118, 120; Windows and doors, 120; Aluminum, 120, Sheet metal, 122; Structural, 122; Tin, 122; Ornamental, 122; Heating, 124; Siding and roofing, 124; Flashing, 124.**

METAL LATH—Sheets of metal which are slit and drawn out to form a mesh on which plaster is spread. **House cross-section, 62; Illustration of, 118; Details and illustrations of types, 525, 529; For base coat plaster, 518; Application, 525.**

METAL WALL TILE—Pressed or stamped squares of metal, surfaced in a wide variety of colors, used to finish walls in kitchens, bathrooms, etc., where an extremely hard-surfaced sanitary finish is desired. **Details of, 370.**

MILLWORK—Generally all building materials made of finished wood and manufactured in millwork plants and planing mills are included under the term millwork, such as doors, window and door frames, sash, blinds, porch work, mantels, panel work, stairways, and special woodwork. It does not include finish dressed four sides, or siding, or partition, which are items of yard lumber. **Made of treated lumber, 76.** See Millwork Section.

MINERAL WOOL—See Rock Wool.

MITER OR MITRE—The joining of two pieces at an angle which bisects the angle of junction.

MITER BOX OR SAW—A device for guiding a hand saw at any desired angle in cutting miter joints.

MOCK RAFTER—A short piece of timber used in the construction of an open cornice to simulate a real rafter; usually sawed ornamentally. Also called rafter stubs or rafter ends. **Construction details, 60-70.**

MODULAR COORDINATION—A system of design in which all dimensions of a structure are laid-out in multiples of 4 inches. This standard applies also to all materials. The purpose is to achieve efficiencies in methods and materials in construction. **Details of, 557, 558.**

MOISTURE BARRIER—See Vapor Barrier.

MOISTURE CONTENT OF WOOD—Weight of the water contained in the wood usually expressed in percentage of the weight of the oven-dry wood. **Determination of, 56; Resistance of wood to decay, 58.**

MOISTURE-PROOFING—Making material resistant to change in moisture content, especially to the entrance of moisture. **Exterior walls, Lumber, 76; Foundation and masonry walls, 536.**

MORTAR—Building material made by mixing cement, lime or plaster of Paris with sand or other aggregate and water and used in masonry, plastering, etc. **Masonry, 535, 536, 540.**

MORTGAGE—A loan with a home or piece of real estate as collateral. **Limits under Regulation X, 589.**

MORTISE—A slot cut into a board plank or timber, usually edgewise, to receive a tenon on another board, plank or timber to form a joint. See Joint. **Door lock, 284.**

MOULDING—Material, usually patterned strips, used to provide ornamental variation of outline or contour, whether projections or cavities, such as cornices, bases, door and window jambs and heads, etc. **Metal, 127; Types, 127, 224; Estimating, 127; Metal, 127, 224; Stock, 218, 224.**

MULLION—The Standard Sash and Door list defines this term as follows: "An upright or vertical bar, usually wider than the ordinary bar, dividing the glass in a sash, or a wide upright bar dividing two sashes in a frame. Applies also to upright bars in doors." **Door, window, 146; Unit windows, 148; Doors, 171.**

MULLION CASINGS—The vertical casing that covers the mullion (both inside and outside) of a multiple window, sash or door frame. **Details of, 146.**

MULLION FRAME—Any frame which contains two or more window or sash openings in the same unit. **Details of, 146.**

MUNTIN—Members dividing the glass or openings of sash, doors, etc. Applies to any short or light bar, either vertical or horizontal in a sash or door, between glass or panels and not extending for the overall width or length of the article. **Illustration of, 146.**

NAIL—A metal device, made of aluminum, steel, brass, etc. and used for fastening two pieces of wood together, or for securing some other article or material to wood. There is a special size and type of nail for every purpose. **Correct use in house construction, 60-70; Application of plywood, 101, 102; Use in house framing, 60-70; Quantity table, 295-298; Illustration of types, 298.**

NEAT PLASTER—Refers to unsanded plaster. **In base coat, 518.**

NEWEL—A post to which the end of a stair railing or balustrade is fastened. Also, any post to which a railing or balustrade is fastened. **House cross-section, 62; Illustration of, 218.**

NEWEL STAIR—A stair with newels at the angles to receive the ends of the strings. Also a spiral stair with the inner or smaller ends of the treads engaged in a solid core. **Illustration of, 218.**

NON-BEARING WALL—A wall supporting no load other than its own weight. **House cross-section, 62.**

NOSE PLATE—In builders hardware, a small plate that surrounds the nose of a cylinder lock.

NOSING—As usually applied, this term is used to designate the rounded edge of a stair tread which projects forward of the riser. **Illustration of, 62.**

NOVELTY SIDING—A sort of drop siding with two beads; drop siding that has a novelty design. Also called German siding. **Details of, 424.**

O.C. ON-CENTER—The measurement of spacing for studs, joists, rafters, etc. in a building from the center of edge of one to the center of edge of the next one to it.

OFFICE MACHINES—Machines, either electric or manually operated that are used in an office, such as an adding machine, typewriter, billing machine, etc. **Details of, 595.**

OGEE—A moulding having a sectional form like the letter S; a form resembling the letter S. Also written O.G.

OIL RESIN PASTE—A base for a type of paint. See Paint. **Details of, 256.**

OPENING SIZES—The opening size of a window or sash is the total size of the glass in width and height, plus whatever allowance is made for the wood that is used for stiles, rails, mullions, and muntin bars. In other words, the opening size of a window is the finished size as it sets in place in the frame. **Rough framing, 145, 159, 162.**

OVER-ALL WIDTH—The total width of a piece of dressed and matched or shiplapped lumber including the width of the tongue or lap. The amount of such lumber required to cover a given area should not be computed on the basis of the over-all width since the tongue or lap is the means of joining the pieces and does not "cover" any surface.

OVERHANG—The tail of a rafter, or the lookout; that part of a building that projects beyond the main structure; as the cornice. See Cornice.

PACKAGE RECEIVERS—See Mail Receivers.

PAINT—Most commonly used to define a liquid substance consisting of pigment, oil, drier, etc. Also used to define products made of other ingredients but used to protect and decorate surfaces of all types. **For finishing plywood, 106; Types of, 255, 256; Exterior, 255; Flat wall, 255; Gloss, 256; Enamel, 256; Varnish, 256; Shellac, 256; Stain, 256; Water, 256; Cement, 256; Roof, 256; Table of covering capacities, 256; Application, 258, 260; Brushes, 260, 262; Applicators, 262; Package selling, 505.**

PANEL—A large, thin board or sheet of lumber, plywood or other material. A thin board with all its edges inserted in a groove of a surrounding frame of thick material. A portion of a flat surface recessed or sunk below the surrounding area, distinctly set off by moulding or some other decorative device. **Plywood for interior finishing, 104; Panel board products, 339, 388.**

PANELBOARD—In house construction, usually refers to the upright board to which is attached the fuse box, switches, etc., controlling the electrical system.

PANEL DOOR—Refers to doors having stile and rail construction with the space between the stiles and rails filled with wood panels. The joints where the rails join the stiles is usually doweled but it is not at all unusual for small mills to use mortise and tenon joints. Panel doors and sash doors use the same construction so far as the frame is concerned and panel doors may be either solid or veneered. **Illustration of, 171; Sizes and styles, 180, 194, 198, 200, 205, 210.**

PAPREG—A name given to a laminated product made of numerous layers of paper, impregnated with glues, and compressed under high temperatures and pressure into a plastic-like substance. **Details of, 78; As a plywood facing material, 108.**

PARGE COAT OR PARGET—Coarse plasterwork applied over masonry as a protection or decoration. A base coat or protective coat for dampproofing. **Details of, 536.**

PARQUET FLOORING—Generally made from quarter-sawed hardwood in square blocks, woven together with metal bands into a large mat that will fit a room. Also, used to describe any wood floor in which the pattern is or resembles an assembly of small squares. **Details of, 384; Application, 384.**

PARTING BEAD—The part of a window frame that separates the upper sash from the lower sash which is set into a groove in the jamb about one-half of its width; a parting strip. **Details of, 146.**

PARTITION, BEARING—A wall that subdivides space within a building and that also supports any vertical load in addition to its own. **Details of, 60-70; House cross-section, 62.**

PARTITION, NON-BEARING—An internal subdividing partition that supports no load other than its own weight. **Framing of, 60-70; House cross-section, 62.**

PATCHING PLASTER—A special compound for patching small holes or cracks in plaster walls. See Plaster.

PEELER LOGS—Specially selected logs, stripped of bark, and cut into sections to fit a veneer lath, used in the manufacture of veneer or plys for plywood. The log is "peeled" in a continuous strip of thin lumber. Process is known as rotary cutting. **In plywood, 101.**

PENETRATING SEAL—A liquid that serves the same purpose as wood filler, except that it penetrates into cracks and fibers rather than forming a coating over them. **Use in finishing hardwood flooring, 386.**

PENNY—A term used for nails; as sixpenny, eightpenny, etc. Also written 6d, 8d. Nails run from two penny to 60 penny in size, and from one to six inches in length. **Uses of, 60-70; Nailing table, 295, 296, 298.**

PERLITE—A volcanic rock which, when heated, expands to form a light-weight non-combustible, cellular material. **Details of, 442, 520; Application, 442, 520.**

PHENOLIC RESIN—An adhesive of unusual holding and water resisting qualities used in the manufacture of plywood, wood laminates, etc. **In plywood, 101.**

PICTURE MOULDING—A narrow moulding fastened to the walls of a room near the ceiling to support pictures hung with hooks. **Metal inserts, 122; Wood, 224.**

PICTURE WINDOW—A large window, usually a single pane, and stationary, designed to admit as much light as possible. They are used primarily in residential construction. **Details of, 148; Installation data, 148.**

PIER—A column of masonry or other material used to support structural members. **Brick, 543.**

PILASTER—A part of a wall that projects not more than one-half of its own width beyond the outside or inside face of a wall, acting as an engaged pier. **House cross-section, 62.**

PILE—A heavy timber, or pillar of masonry or metal, forced into the earth or cast in place to form a foundation member.

PITCH—The incline or rise of a roof. Pitch is expressed in inches of rise per foot of run, or by the ratio of the rise to the span. See Span. Also, a resinous substance, either solid or liquid, found in lumber. **Details of roof pitch, 68; Pertaining to figuring roof areas, 406.**

PLAIN RAIL—Meeting rails of the same thickness as balance of window. Opposite of Check Rail.

PLAIN RAIL WINDOW—Plain rail windows consist of two sash so arranged in the frame as to slide vertically, each past the other. Stock plain rail windows are always 1⅛ inches thick and the frame channel in which they slide is made just wide enough to accommodate the thickness of two sash without any allowance for check stop as is the case with check rail windows. In other words, both top and bottom sash slide in the same channel. There are two kinds of plain rail windows—"Eight Light" and "Twelve Light."

PLAIN-SAWED LUMBER—Lumber that is sawed from the log without regard to the grain. Also called bastard sawed lumber. **Details of, 49-50-52.**

PLANCHER—A board used in the construction of a cornice; as the bottom board of a cornice; a soffit, planceer. **Estimating for cornices, 74.**

PLANCIER—The horizontal portion of a cornice extending from the frieze to the fascia under the lookouts or rafter ends. **See Cornice. Estimating for cornices, 74.**

PLANK FLOORING—See Hardwood Flooring.

PLASTER—A mixture of lime, water, and sand; used on walls of buildings as a finishing material. To put on plastering. **Painting of, 258; Composition of, 517; Types, 518; Two and three coat, 517, 518; Gauging, 518; Perlite, 520; Vermiculite, 520; Estimating, 520.**

PLASTER BASE—Any material on which plaster is to be applied, such as wood lath, metal lath, woven wire fabric, plaster board, etc. **Details of, 520, 525.**

PLASTER BOARD—Also called gypsum board. A sheet material having a core of gypsum between two outside layers of paper. Is made in three forms, lath, sheathing, wallboard. **Types of, 362; Lath, 362; Sheathing, 362; Wallboard, 362; Application, 362.**

PLASTER OF PARIS—Most common and universal term, used when speaking of calcined gypsum. Derives its name from extensive deposits of gypsum found in the neighborhood of Paris, France. **In gauging plaster, 518.**

PLASTIC—A wide variety of chemical products. In the building field, the glues used in exterior plywoods is a type of plastic. Compregs and papregs are also plastics. Certain types of paints are called "plastic" and several types of plastic tile for wall finishing are also manufactured. **As a plywood overlay, 108; Screening, 292; Wall tiles, 370; Laminated board, 368; Plastic laminates, 496.**

PLASTIC GLAZING—See Glazing, Plastic.

PLASTIC LAMINATES—Referring to a group of panel products built up of layers of impregnated paper or plastic, fused under pressure and heat into a tough, durable, gloss surfaced material for lining walls, ceilings, counter tops, etc. **On plywood, 108; Details of, 496; Illustration, 496.**

PLASTIC SCREENING—A plastic mesh material, made in standard meshes and sizes for covering screen doors and windows. **Details of, 292.**

PLASTIC TILE—Thin, moulded squares of plastic, with a wide variety of colors integrally incorporated in them; used to finish walls and ceilings of rooms where a tile finish is desired. These tile are usually applied with a mastic. **Details of, 370.**

PLATE—A horizontal member laid on a wall or spiked to the top of studding, upon which joists are set. Usually a single plate is used at the bottom and two at the top. Also called false girt. **To estimate, 60; Illustration of, 64, 66; Partition, 66; House cross-section, 62; Electrical, 343.**

PLATE GLASS—Glass cast in thick plates and flattened with heavy rollers; mostly used in show and store windows. Glass running about one-fourth inch thick and highly polished. **Details and specifications, 324, 329.**

PLATE, OUTSIDE STUDDING—Usually the same size as studding. The lineal feet required will be three times the number of lineal feet in the perimeter of the building for single sole and double plate. **Details of, 60; Cap, 64; House cross-section, 62.**

PLATE, PARTITION STUDDING—Should be the same dimension as the partition studding and the lineal feet required will be three times the number of lineal feet in the length of the partitions for sole plate and double top plate. **Details of, 66.**

PLUMB—Exactly perpendicular, vertical.

PLUMB BOB—The weight or bob on a plumb line.

PLUMB LINE—A string or cord with a weight at one end used to establish a perpendicular line.

PLUMB RULE—A narrow board with a plumb line and bob.

PLUMBING SYSTEM—The installation in buildings that provides the necessary pipes and other fittings for securing and controlling the supply of water and for facilitating the drainage of water. **Types of, 458; Laying out, 458; Fixtures, 458; Drainage systems, 458; Sewage disposal, 460; Home water systems, 460.**

PLY—A term to denote the number of thickness or layers of roofing felt, veneer in plywood, etc., in any finished piece of such material. **See plywood, laminated wood, compreg, papreg.**

PLYWOOD—Sheets or panels of wood made of three or more layers of veneer jointed with glue and laid with the grain of adjoining panels at right angles. Almost invariably an odd number of plies are used to obtain balanced construction. **Definition of, 101; How made, 101; Softwood, 101; Grades and specifications, 102; Interior, 102; Exterior, 102; Uses and applications, 102; Finishing data, 104; Weight of, 106; Hardwood, 106; Types of, 108; Special facings and overlays, 108.**

POCKETS—Any check rail window frame in which weights are used to balance the sash must include provision for a space just back of the jambs to permit the up and down movement of the weights. A small closable opening must also be provided in the jamb to permit access to the weights after the installation of the inside casings. This space together with the opening in the jamb is called "pocket." **Details, 146.**

POINTING—The treatment of joints in masonry for appearance or protection by filling with mortar under tool pressure and usually to a definite form. Also, the filling placed in joints of roofing of slate, tile, etc., as a closure. **Details of, 540.**

PORTLAND CEMENT—A cement made by burning and grinding a mixture having the correct chemical proportions. An artificially proportioned cement; as opposed to a natural cement. See Cement.

PORTLAND CEMENT MORTAR—A mortar made of Portland cement and sand. **Proper mixes of, 536.**

POST—A structural member which is set vertically. **Timber, 49, 50; Corner, 66; Made of treated lumber, 76; Adjustable cellar, 115.**

POWER TOOL—A tool operated or driven by power. See Tools. **Details of, 559; Portable, 559-562; Stationary, 559-562.**

PREFABRICATED CONSTRUCTION—See Construction, Prefabricated.

PRE-CUTTING—The practice of cutting to correct length, shape, and size of various parts of a structure before they are delivered to the construction site. **In house construction, 557; Farm buildings, 558.**

PRESERVATIVE—With reference to wood, any substance applied to or injected into wood to protect it from attack by fungi, insects, or moisture. See Lumber Treated. **In wood laminates, 76; In commercial lumber, 76; Types of, 76; Package selling, 505.**

PROJECTED WINDOW—A window of metal or wood that has one or more sash that pivot on a horizontal axis. **Details of, 146.**

PURLIN OR PERLING—A supported piece of timber placed under rafters to prevent them from sagging, between the point where they rest on the wall and the ridge. **Construction details, 60-70.**

PUTTY—A type of cement usually made of whiting and boiled linseed oil, beaten or kneaded to the consistency of dough, and used in sealing glass in sash, filling small holes, and similar purposes. **Puttying nail holes before painting, 258; How to glaze a window, 338.**

QUARTER ROUND—A moulding whose cross-section would be one-quarter of a circle. **Details and sizes, 218.**

QUARTER SAWN—See Grain.

RAFTER END—The tail of a rafter; a false rafter used on the eaves of a roof to support the cornice and gutter. **Details of, 68.**

RAFTER, JACK—A rafter that reaches from the wall plate to a hip, or from a valley to a ridge. **Details of, 68.**

RAFTER, LAMINATED—See Laminated Wood.

RABBET—A rectangular longitudinal groove cut in the corner of a board or other piece of material. **In door jamb, 171; In wood siding, 420.**

RAFTER—One of a series of structural members of a roof designed to support roof loads. The rafters of a flat roof are sometimes called roof joists. **Density, 54; Beveled, 64; Notched, 64; Details of, 66; House cross-section, 62; Wood laminated, 78.**

RAFTER, COMMON—A rafter that reaches from wall plate to ridge. **Details of, 64, 66, 68; Estimating, 68.**

RAFTER, DOUBLE JACK—A rafter that reaches from a valley to a hip. **Details of, 68.**

RAFTER, VALLEY—A rafter which forms the intersection of an internal roof angle. **Illustration of, 68.**

RAIL—A horizontal bar extending from one post or support to another, as a guard in a fence, stairway, etc. Also the

cross or horizontal members of the framework of a sash, door, shutter, or any paneled assembly. **House cross-section, 62; In windows, 146; Door, 171; Stair hand rail, 218.**

RAKE JOINT—In masonry, a joint that has the mortar raked out to a certain depth while it is still green.

RANDOM LENGTH AND WIDTH—In lumber, the term applied to a shipment or bill of standard length and width material, but of various lengths and widths.

REFLECTIVE INSULATIONS—A wide variety of materials such as foils or metallic coatings that reflect or turn back heat, thus serving the dual purpose of insulating and vapor barrier. **Details of, 418, 442; Types, 442; Application, 442.**

REINFORCING—Steel rods or fabric placed in concrete slabs, beams or columns to increase their strength. **Details of, 536.**

RE-SIDING—A term applied to the process of covering over existing exterior walls of buildings with a new material. **Asbestos cement board for, 414; Wood shingles, 418; Insulating, 426.**

REVERSED DOOR—A door opening in the opposite direction to that which is considered regular. Room doors that open inward are "regular" and those opening outward are "reversed." Cupboard doors which open outward are "regular."

RIBBON—A board dapped into the studding to support the second floor joists; a ledger board. **Details of, 64.**

RIDGE—The highest horizontal line along the upper angle of a roof where two inclines meet. **Details of, 68; House cross-section, 62; Pertaining to figuring roof areas, 405, 406.**

RIDGE BOARD, ALSO RIDGEPOLE OR RIDGEPIECE—The highest horizontal members in a roof to which the upper ends of rafters are fastened. In the average house a piece of 1x6 roof board is usually used. The number of lineal feet required is the length of the roof. **Details of, 70; Specifications, 70; House cross-section, 62.**

RIDGE ROLL—A strip of sheet metal, composition roofing tile, or wood to finish and cover a ridge. See Hip Roll. **Sheet metal, 122; Asphalt, 410.**

RIM LOCK OR LATCH—Designed for application to the surface of the door. **Illustration of, 282.**

RISE—With reference to roofs, the perpendicular height of a roof ridge above the wall plates. In stairs, the perpendicular height of a step or flight of steps. **How to figure, 68; House cross-section, 62; Estimating stair, 214; Figuring roof areas, 405, 406.**

RISER—Also Raiser—The vertical board under the tread in a stairway. See Stair. **House cross-section, 62; Illustration, 218.**

ROCK WOOL—A material that looks like wool, but made of rock by heating to high temperature and blowing into a fibrous mass. Also called mineral wool. **Details of, 440.**

ROOF BOARDS—The kind of roof boards to be used depends on the kind of shingles to be applied. For wood shingles the roof boards are usually 1x4 or 1x6 spaced 2 inches apart to allow for the circulation of air to prevent the rolling of shingles. To find the amount of roof boards required, determine the area of the roof and deduct 1/5. If asphalt, asbestos or slate shingles are applied, the roof boards should be 1x6 board laid solid or "tight". Add 5% to the roof area to determine the amount of boards required. **Details of, 72; House cross-section, 62.**

ROOFING NAILS—A short nail with a large, flat head. Some roofing nails are barbed. **Details of, 296; Asphalt, 410; Asbestos cement, 414; Wood shingles, 416.**

ROOF—That part of a house or other structure that forms the overhead covering. **Types of, 405; How to figure areas, 405; Pitches, 406; Flashing of, 406.**

ROOF PAINT—Bituminous products used to coat and waterproof certain types of roofs. **Details of, 412.**

ROOF SHEATHING—The boards or plywood nailed to the roof rafters on which the roofing is laid. **Boards, 70; Plywood, 70; House cross-section, 62.**

ROOF TIES—Collar Beams. Members, boards, or planks, fastened to rafters above the plates, set at regular intervals, (usually on 4'0" centers), to prevent walls and roof from spreading. **Construction details, 60-70.**

ROOFING—Pertaining to the material applied as the outside covering of a roof. **Asphalt, 406; Asphalt cements, 412; Asbestos cements, 412; Red cedar, 416; Aluminum, 426; Package selling, 505.**

ROUGHING IN—Doing the rough work; as roughing in a stair meaning that the rough framing of a stair is being installed. Also used in plastering, plumbing, etc., doing the rough work. **Construction details, 60-70.**

ROUGH OPENING—A window or door opening before it has been finished. Any unfinished opening. **Details of, 66; Diagram of, 145.**

RUBBER TILE—Flooring tile made of rubber. **Details of, 392; Uses and applications, 392; Illustration, 392.**

RUN—In reference to roofs, the horizontal distance from the face of a wall to the ridge of the roof. Referring to stairways, the net width of a step also the horizontal distance covered by a flight of steps. **Of rafters, 68; Of stairs, 214.**

RUNNING BOND—A bond that consists of from four to seven courses of stretchers which are bonded with a header course; also called garden bond. See Bond.

RUSTIC SIDING—Siding that has a shiplap joint where the pieces join each other. **Details of, 424.**

SAND—Very fine grains of rock, not yet ground to powder. A material used in mixing mortar, as sand and cement. **In plaster, 518; Concrete, 533, 534, 535.**

SAND FINISH—In plastering, a finish made with a carpet float by rubbing the surface in order to bring out grains of sand to the surface. Also called rough sand finish. **Details of, 518.**

SANDING MACHINES—Power machines that spin a belt or a disc of sandpaper, used to sand floors and other surfaces. **Floor sanders, 564; Rental of, 386; Production shop, 576.**

SAPWOOD—The outer layers of growth in a tree, exclusive of bark, which contains living elements, usually lighter in color than heartwood. Under most conditions sapwood is more susceptible to decay than heartwood but is not essentially weaker or stronger than heartwood of the same species. **Strength properties of, 54; Resistance to decay, 58.**

SASH—A frame of wood, or metal, into which a pane, or panes, of glass may be set, for use in the walls of a building to provide for the entrance of sunlight, and to act at the same time as a barrier to the escape of heat and to the entrance of such other forces as would interfere with the comfort and safety of the occupants. **House cross-section, 62; Types of, 145, 146; How to glaze a window, 338.**

SASH BALANCE—Any sash that slides up and down usually requires some kind of balance. There are three leading types of mechanical sash balances: tape or drum type, flat type and spiral type. **Illustration of, 146.**

SASH BAR—One of the small bars that divide the panes of glass of a window sash. Also called muntin bar. See Muntin Bar.

SASH CHAIN—Chain used instead of cord. Comes in several sizes and finishes for all types of double hung windows. **Illustration of, 146.**

SASH CORD—Specially fabricated rope used to connect sash and their sash weights. **Illustration of, 146.**

SASH LIFT—A bar, plate, or hook attached to a window to facilitate raising and lowering. **Illustration of, 146.**

SASH RIBBON—A thin metal band for use with sliding sash instead of chain or cord. **Illustration of, 146.**

SASH WEIGHT—Metal counter balances to facilitate raising and lowering sliding sash, and to maintain them in any desired position.

SCAFFOLDING OR STAGING—A temporary erection of timber or metal, used as a platform by men in construction work. **Metal brackets, 122.**

SCANTLING—A term generally applied to any piece of timber under five inches square. **Classification of lumber, 54.**

SCRATCH COAT—The first coat of plaster which is scratched or roughened to form a bond for the second coat. **Details of, 517; How applied, 517.**

SCREEDS—Strips of wood, plaster, metal, or cement serving as guides for plasterers, cement workers, etc. Sometimes the term is applied to nailing strips for flooring. **Metal base, 122.**

SCREENING—The term applies to fine mesh wire of bronze, copper, galvanized steel, and plastic used to cover screen doors, windows. **Details of, 290; Types, 290; Specifications, 290; Plastic, 292.**

SCREENS—A term applied to frames covered with wire mesh that are placed over windows in summer to keep out insects and other pests. **Page 290; Package sale of, 505.**

SCREEN MOULDING—A small, flat moulding used to cover the staples and edge of screen wire where it is nailed to the wood. **Details and sizes, 220.**

SCREW—A metal fastening device consisting of a pointed, threaded shank with a slotted, square, or hexagonal head. By twisting into two pieces of wood, the screw holds them securely together. **Types and sizes, 292.**

SELECT—In lumber grading, a term applied to the highest quality. **Classification, 50; Grade table, 54.**

SEPTIC TANK—A receptacle, usually underground, to which sewage is drained and retained to effect disintegration of the organic matter by bacteria. **Package selling, 505.**

SEWER PIPE—A pipe or conduit to carry off water and waste. Usually made of cast iron or clay. See Soil Stack. **Details of, 544; Illustration of types, 544.**

SHAKE—A handsplit shingle or imitation thereof. Wood shakes are split along the grain, most of the break being between the rings of annual growth. **Details of, 420.**

SHEATHING—The first layer of exterior wall covering, nailed to the studding. Roof boards are also sometimes referred to as sheathing. **Application of diagonal, 70, 72; Plywood, 70, 104; Sheathing panel, 70; House cross-section, 62.**

SHEATHING BOARD—A panel board used for sheathing. Any panel board used for sheathing instead of lumber. **Illustration of, 70; Board Products Section, 347-364.**

SHEATHING PAPER—Building paper used between the boxing of a building and the outside finishing; as between the siding and sheathing, or between the shingles and roof sheathing. See Building Paper.

SHED ROOF—A sloping roof, formed by the difference in height of two parallel walls. **Rake finish for, 74; Figuring areas of, 405.**

SHEET METAL—Metal that is prepared in sheets; as galvanized sheet metal, sheet tin, sheet copper, etc. **Building products, 122, 124.**

SHELLAC—Lac which has been purified and dissolved in alcohol or a similar solvent. **Details of, 256.**

SHIM—To block up with thin strips. A process employed to level joists or other assemblies that are not exactly level.

SHINGLE—Roof covering of asphalt, asbestos, wood, or other material cut to stock lengths, widths, and thicknesses. **Asphalt, 410; Asbestos cement, 414; Red cedar, 416; Package selling, 505.**

SHINGLE NAIL—A 3 penny nail used for applying roofing. Usually galvanized it is heavier than a lath nail and has a larger, flat head. **Nailing chart, 295-298.**

SHINGLES, SIDING—Various kinds of shingles used to cover sidewalls of buildings. **Details of, 420; Package selling, 505.**

SHIPLAP—See Lumber, Shiplap.

SHOE—A small moulding on the order of quarter round nailed next to the floor on base boards. See Base Shoe.

SHOE RAIL—A strip of lumber of no set size but frequently approximating the size of a two by four, which is grooved on the top to receive the balusters of a balustrade. The bottom rail of a porch balustrade is usually made in this way. A curb string stair uses a grooved shoe for the top member of the box which forms the curb string.

SHOP EQUIPMENT AND TOOLS—Those tools and articles of shop equipment that are used in a home or production shop. **Home workshop, 559-564; Production, 573-578.**

SHUTTER—See Blind.

SIDE OF TRIM—A side of trim consists of all the finish required to trim an opening in a wall, such as a window or sash or one side of a door opening. When two or more windows are built into one frame the trim is designated in the same way as the frame, that is—1 side twin window trim, 1 side triple window trim, etc. If the opening is a door the size of the door will indicate the side of trim. **Details of, 146.**

SIDING—The finish covering of the outside wall of a frame building, whether made of weatherboards, vertical boards with battens, shingles, or other material. **House cross-section, 62; Plywood, 101; Metal, 120; Over insulating board sheathing, 352; Shingle and shake, 420; Wood, 420; Insulating, 426; Roll, 426; Aluminum, 426; Package selling, 505.**

SIDING CORNERS—Corners made with sidings; mitred corners made with siding without corner boards. **Details of, 116, 122.**

SIDING, DROP—Usually ¾-inch thick and 6 inches wide, machined into various patterns. Drop siding is center matched, is stronger, and tighter than bevel siding. **Details of, 424.**

SIDING, FLUSH—Tongue and groove boards laid flush on sidewalls. **Details of, 424.**

SIDING, INSULATING—Composition panels, made to simulate stone or brick, that may be applied directly over old siding. **Details of, 426.**

SIDING, ROLL—Roll material consisting of an asphalt impregnated base upon which a granular surface is formed to simulate brick, stone, etc. Used to cover old siding. **Details of, 426; Illustration, 426.**

SIDING, RUSTIC—Similar to drop siding, with shiplap joints. **Details of, 424.**

SIDING, VERTICAL—Matched boards 10 and 12 inches wide, or of random width, the joints of which may be V-cut or covered with battens. **Details of, 424.**

SILL—The lowest member of the frame of a building, resting on the foundation wall and supporting the frame. Also, the member forming the lower side of an opening, such as a window sill, door sill, etc. **To estimate, 60; Illustration of, 60; Window, 66; House cross-section, 62; Treated lumber, 76; Brick, 543.**

SLAKING—The act of hydrating quicklime into a putty by the addition of water.

SLIDING DOOR HARDWARE—Specially constructed metal parts that permit the easy function of sliding doors. **Illustration of use, 292; Details of, 292.**

SINGLE-STRENGTH GLASS—Glass that runs from 13 to 15 thicknesses to the inch. Also called single-thick glass. **Details of, 321; Sizes and specifications, 321, 324.**

SOFFIT—A board used on the under side of a cornice; a plancher board. Also, the under surface of a flight of stairs. **Use of plywood for, 101.**

SOFTWOOD—The group of trees which have needle-like or scale-like leaves, often referred to as conifers. The term softwood has no reference to the softness of the wood. **Classification of, 49, 50.**

SOIL STACK—In a plumbing system, the principal vertical pipe that receives and carries waste from all fixtures. **Details of, 124.**

SOLDER—Any of various fusible alloys, used with a heated iron to join two pieces of metal. **Used in flashing, 124.**

SOLDIER—The side of a wall in vertical position.

SOLDIER COURSE—A course of bricks placed vertically with edges exposed. **Details of, 543.**

SOLE OR SOLE PLATE—A horizontal member, usually a 2x4, on which wall and partition studs rest. **Details of, 64; Illustration, 70; House cross-section, 62.**

SPAN—The distance between the supports of a rafter beam, girder, arch, truss, etc. **Girder spans, 60; Headers, 66; In figuring roof pitches, 406.**

SPECIAL MILLWORK—Any item of woodwork or mill-work manufacture that has features which distinguish it from items of stock manufacture are termed "Special".

SQUARE—A unit of measuring in building—100 square feet of surface. Roof coverings and many sidewall coverings are See Roofing, Shingles, Siding, **405.**

STACK PARTITION—A partition which carries the stack or soil pipe, sometimes constructed with 2x6 or 2x8 studs, and continuous from first floor to attic floor lines. **House construction details, 60-70.**

STAIN—In lumber, a discoloration caused by improper drying, or by the presence of certain fungi. **Prevention of, 56.**

STAIN—In painting, an oil or water base liquid used to tint but not cover with an opaque layer. Most widely used in

furniture and woodwork where an accentuation of beautiful grain is desired. **Types and uses, 256; Finishing hardwood flooring, 384; Shingles, 416.**

STAIR RISE—The vertical distance from the top of one stair tread to the top of the next one above it. **House cross-section, 62; Estimating, 214.**

STAIR RISERS—See Rise.

STAIRWELL—The space reaching from one floor of a building to another in which the stairs are erected. Also called a well hole. **House cross-section, 62.**

STANCHION—See Basement column. A traplike apparatus for holding cattle in a stable. **Details of, 548.**

STEEL BEAM—In construction work, a beam made of steel, as an I beam, channel beam, tees, etc. **Details of, 122.**

STEEL FRAME CONSTRUCTION—See Construction, Steel Frame.

STICKING—The moulded edge machined on the rails of a door around the panels or lights. Also, a term applied to the process of separating successive layers in a lumber pile, tc permit the passage of air throughout the entire pile. **Illustration of, 56; Door details, 194, 198, 200.**

STILE—The upright or vertical outside members of a sash, door, or blind. **Window, 146; Door, 148.**

STILE AND RAIL DOOR—Any door in which the visible framework is made up of some combination of stiles and rails. **Illustration of, 171.**

STOCK SIZES—It is impossible for any millwork warehouse to carry all listed sizes of doors and windows in stock. "Stock sizes" are usually indicated for the convenience of the trade, either in the catalogue itself or on a specially issued "Stock Sheet." **Millwork, 145, 159, 162, 180, 194, 198, 200, 205, 210.**

STOOL—The flat, narrow shelf forming the top member of the interior trim at the bottom of a window. **Illustration of, 146; Details and sizes, 159.**

STORE LAYOUT—The arrangement of a sales area for maximum sales and display efficiency. **Details of, 595.**

STORM DOOR—A door 1⅛ inches in thickness which is set into an exterior opening between the jambs and flush with the outside casing. They are made either all panel with no glass or they may be part panel with one or more lights in the upper part. They are useful in winter to provide a better barrier to cold air and drafts than is possible with a single door. **Fuel saving table, 448; Package selling, 505.**

STORM SASH—A single sash, full size of the frame, which is installed flush with the outside casing of the window frame of a frame building or flush with the brick moulding of the window frame of a masonry building. **Standard sizes, 159; Details of, 170; Importance in insulation, 447; Fuel saving table, 448; Package selling, 505.**

STORY, ATTIC—That part of a building situated wholly or partly within the roof frame, or between the top story ceiling and the roof, usable for storage but not finished for habitation. **House cross-section, 62.**

STRAPPING—A term applied to the practice of binding lumber and other materials together with steel bands, wire or filament tape to facilitate storage and handling. **Illustration of, 580.**

STRETCHER BOND—In bricklaying, a bond with the brick laid so that all are stretchers. A bond of stretchers. In stonework, a bond with the stone laid so as to show the long edge on the face of the wall. **Details of, 541.**

STRIKE—A metal piece fastened to the door frame which engages the bolt or a lock to secure the door. Same as striker, striking plate and keeper. See Hardware.

STRINGER—A timber or other support for cross members. In stairs the support on which the stair treads rest; also string board. **Timber, 49; House cross-section, 62; Illustration of, 218.**

STRIP FLOORING—See Hardwood Flooring.

STRUCTURAL BUILDING BOARD—See Insulating Building Board.

STRUCTURAL GLASS—Opaque colored glass applied to walls or other horizontal surfaces. **Description, uses, sizes, installation of, 330.**

STRUCTURAL LUMBER—Lumber that is 2 or more inches thick and 4 or more inches wide, intended for use where working stresses are required. The grading of structural lumber is based on the strength of the piece and the use of the entire piece. **Classification, 49, 50.**

STRUCTURAL METAL—A classification of metal building products that are used as structural members of a building; such as girders, framing, lally columns, etc. **Details of, 122, 124.**

STUCCO—Most commonly refers to an outside plaster made with portland cement as its base. In some regions the trade refers to gauging plaster as stucco. **Over insulating board sheathing, 352; Application, 535; Estimating, 535.**

STUD OR STUDDING—One of a series of slender wood or metal structural members placed as supporting elements in walls and partitions. They are usually 2x4 inches in size. **Outside studding, 65; Spacer, 66; Gable, 68; House cross-section, 62.**

SUB-FLOOR—Matched lumber or boards laid on joists over which a finish floor is to be laid. 1x6 D & M is commonly used in home construction. To find the amount required, determine the area to be covered and add 20% if laid diagonally. **Details of, 65; Illustration of, 70; House cross-section, 62; Made of treated lumber, 76; Plywood, 101.**

SWITCH—An article in a wiring circuit that breaks the electrical contact and permits the turning on and off of the lights in a fixture or series of fixtures. **Location of in kitchen planning, 490; Details of, 343.**

TAIL—A lookout of a rafter; a short piece nailed to a header in framing openings; a tail beam. To tail into a wall, as tailing a step, etc.

TAILPIECE—A relatively short beam, joist or rafter supported in a wall on one end and by a header on the other.

TAPE—A pressure sensitive paper tape for use in painting, etc. **Details of, 258.**

TEMPLET OR TEMPLATE—A pattern or mold used by tradesmen as a guide in shaping intricate or exacting portions of a structure or object.

TENON—That portion of the end of a board, plank or timber which is reduced in thickness so that it may be inserted in a corresponding slot, called a mortise, cut into another piece of board, plank or timber to form a joint. See Joint.

TERM FINANCING—A system whereby the purchase price of an article is repaid by the buyer in a series of monthly installment payments. **Details of, 589-593; Under Regulation X, 589.**

TERMITE SHIELD—A shield, usually of non-corrodible metal, placed in or on a foundation wall and overlapping on both sides. Its purpose is to prevent termites from passing that point to the wood in the building above. **House cross-section, 62; Package selling, 505.**

TERRA COTTA—In building, an artificial building material made of clay, used mostly for ornamental work to take the place of stone.

THRESHOLD—A strip of wood or metal beveled on each edge used above the finish floor under outside doors. **Metal, 120.**

TIMBERS—See Lumber, Timbers.

TIMBER CONNECTORS—Rings and dowels of metal or wood in adjoining members, placed in pre-cut grooves or holes in timber framing, with the timber members then drawn and held tightly together by bolts. These devices provide an efficient means of transferring load at the joints of structural members. **Details of, 120.**

TOENAIL—In carpentry, a method of driving nails obliquely to fasten pieces of lumber together. **Use of, 60-70.**

TONGUE AND GROOVE—See Dressed and Matched.

TOOL—A term applied to a wide variety of hand and power instruments used to cut, drill, shape, or fashion materials. Also instruments designed specifically for a particular operation. **Details of, 559; Types, 559; Power, 559-562; Hand, 562; Care of, 562; Rental of, 564; Selection of inventory, 566.**

TRANSOM—A small sash above a door, window, or other sash.

TREAD—The horizontal board of a stairway on which the foot is placed. **House cross-section, 62.**

TREATED LUMBER—See Lumber, Treated.

TRIM—The finish materials in a building such as mouldings applied around openings, or at the floor and ceilings of rooms; baseboard, cornice, picture moulding, etc. **Decorative metal, 127, 130, 224; Window, 152, 154; Decorative metal, 127, 224; Steel door, 171.**

TRIMMER—Double or triple joists or timbers for framing an opening. Support for headers. **Sizes of, 65; Estimating, 65; House cross-section, 62.**

TRUSS—An assembly of timbers or metal members, fastened together so as to mutually support each other and to prevent sagging or distortion of any kind, used as one of the principal supports for a roof. **Laminated wood, 78; With timber connectors, 120.**

TURPENTINE—An oleoresin derived from certain coniferous trees which, when distilled has many uses in the paint industry, as a thinner, etc. **Details of, 255-262.**

UNIT WINDOW—A term usually applied to a metal or wood window that is supplied complete ready for installation in a rough opening. Generally supplied by manufacturer K.D. but with all necessary parts precision made for easy assembly at the job site. Term includes all types of windows, double-hung, casement, projected, picture, etc. **Details of, 146; Installation data, 146.**

VALLEY RAFTER—The main rafter of a valley, in roof framing. **Construction details, 68, 70, 62.**

VAPOR BARRIER—Material used to retard the flow of vapor or moisture into walls and thus prevent condensation within them. There are two types of vapor barriers—the membrane, which comes in rolls and is applied as a unit in the wall or ceiling construction; and the paint type which is applied with a brush. The vapor barrier must be a part of the warm side of the wall.

There are available today, batt, blanket, board, and foil insulations that have a vapor barrier incorporated in them. **For wood sheathing and siding, 436; Details of, 436; On batts and blankets, 438; With loose fill, 440.**

VARNISH—A preparation which consists of resinous matter dissolved in an oil or in alcohol, which when applied to the surface of wood or metal dries and leaves a hard, glossy coating. **Details of, 256; Use in finishing hardwood floors, 384.**

VENEER—Thin sheets of wood, less than 1/4" in thickness. **In plywood, 101; How figure is obtained, 106; Package Selling, 505.**

VENETIAN BLINDS—A blind for windows having parallel horizontal slats that may be opened or closed.

VENT—A minor opening to permit passage of air through any space in a building, such as the attic or the unexcavated area under a first-floor construction. **Metal louvres, 116; Vent pipe flashing, 124.**

VENTILATOR—An article or system that permits the ventilation of a building or portion of a building. **Louvres, 116; Building, 116; Attic, 460.**

VERGE BOARD—A board in a gable end just under the ridge, sometimes paneled or moulded. See Barge Board. **Cornice details, 74.**

VERMICULITE—A mineral closely related to mica, with the faculty of expanding on heating to form light weight material with insulation quality. Used as bulk insulation and also as aggregate in insulating and acoustical plaster and in insulating concrete floors. **As loose fill insulation, 440; Details of, 440; Application, 440; Aggregates, 442.**

WAINSCOT OR WAINSCOTING—The facing material applied to the lower part of an interior wall contrasting with that of the upper part. **House cross-section, 62.**

WALL, BEARING—A wall which supports any vertical load in addition to its own weight. **Construction details, 60-70.**

WALLBOARD—Wood pulp, gypsum, or other materials made into large, rigid sheets that may be fastened to the frame of a building to provide a surface finish. See Board Products, **347.**

WALL, DRY—A wall constructed of material which is put in place without the use of plaster. **Details of, 348, 362, 366, 368.**

WALL, FACED—A masonry wall faced on one or both sides with a material different from the body of the wall, in which the facing and the body are bonded so they will act as a unit under loads. **Details of, 533.**

WALL, FOUNDATION—Any bearing wall or pier below the first-floor construction. **Details of in light construction, 64; House cross-section, 62; Concrete, 534.**

WALL, NON-BEARING—A wall which supports no vertical weight other than its own. **Framing of, 66; House cross-section, 62.**

WALLPAPER—Paper manufactured in sheets or rolls, usually with printed decorative patterns in color, for pasting and covering walls and ceilings of rooms. **Over plywood, 104; Details of, 264; Package selling, 505.**

WALL TIES—Narrow corrugated metal strips used to tie brick veneer walls to sheathing. **Details of, 120; Wall plate ties and anchors, 120; In laying glass blocks, 337; Brick veneer, 533.**

WALL, VENEER—A wall with a masonry facing which is attached to, but not bonded so as to form an integral part of the wall for purposes of load bearing and stability. **Details of, 533.**

WANE—Bark on the edge of a piece of timber. In case the bark is removed it is still wane. If a part of the timber is split off at the edge leaving a rounded corner, it is called wane.

WARP—Any variation from a true plane surface. It includes bow, crock, cup, or any combination thereof.

WATER PAINT—See Calcimine.

WATERPROOFING—Material used to make a roof or a foundation waterproof. The act of making any article or material waterproof. **Treated lumber, 76; Masonry foundation walls, 534, 535.**

WAX—A liquid or semi-solid substance which when spread over wood or other surfaces and allowed to dry or is rubbed, forms a highly gloss protective coating over the surface. **Application to hardwood floors, 386.**

WEATHERBOARD—Any ordinary siding. See Siding.

WEATHER STRIPS—Weather strips are usually strips of thin metal so fitted to the outside edges of a door or a window, or to the jambs of a door or window frame, that when the door or window is in a closed position the crack that is necessary for easy operation is completely closed. Strips of felt are sometimes used but the felt often interferes with the opening or closing of the door or window and lacks the permanency that is desirable. Practically all of the most recently built factory window frames use weather strips of one design or another. **Types of, 178, 214.**

WELL—In a building, an open, unoccupied area bounded on all sides by the walls of a building passing through at least one floor, commonly used to supply light and air for stairways and minor interior spaces. **Framing of, 62.**

WHITE COAT—In plastering, a finish that consists of gauged stuff smoothed and polished with a trowel. Also called hard-finished white coat. **Details of, 517.**

WHITE LEAD—A basic pigment used in paint. **Details of, 255, 256.**

WHITEWASH—A sort of water paint made of slaked lime and water. If sizing is used, about one pound to a bushel of lime, the wash will not chip off.

WINDOW—An opening to the outside, other than a door, which provides all or part of the required natural light, natural ventilation, or both, to an interior space. **Made of treated lumber, 76; Metal, 120; Utility, 120, 146; Types of, 145; Metal sizes, 152-154; Stock Ponderosa, 159, 162.**

WINDOW FRAMES—An exterior frame which encloses a window in walls of a building. **House cross-section 62; Illustration, 146.**

WINDOW SASH—One or more units of a window. In double-hung windows there are two sash. The term "sash" is commonly used in practice as both singular and plural. **Details of, 146.**

WOOD FIBER BOARD—See Fiber Board.

WOOD FIBER PLASTER—Plaster formulated to be used neat or with one part sand. Contains shredded wood fiber instead of hair or sisal fiber. Advantages include easier application, greater strength, ease of cutting for remodel work and greater fiber resistance. **Details of, 518.**

WOOD FILLER—A semi-liquid material, usually colorless, that is applied over sanded wood surfaces to fill all crevices and make the surface absolutely smooth. **Use in finishing hardwood floors, 386.**

WOODWORKING MACHINERY—Pages 572-576.

WROUGHT IRON—A comparatively pure form of iron which contains practically no carbon, and which is easily forged, welded, and does not harden when cooled suddenly. **Hardware, 286, 290.**

ZINC—A bluish-white metallic element used in making galvanized iron, alloys; and when rolled or drawn for flashings and mouldings. **Flashing, 124; In paint, 255.**

EXTRA

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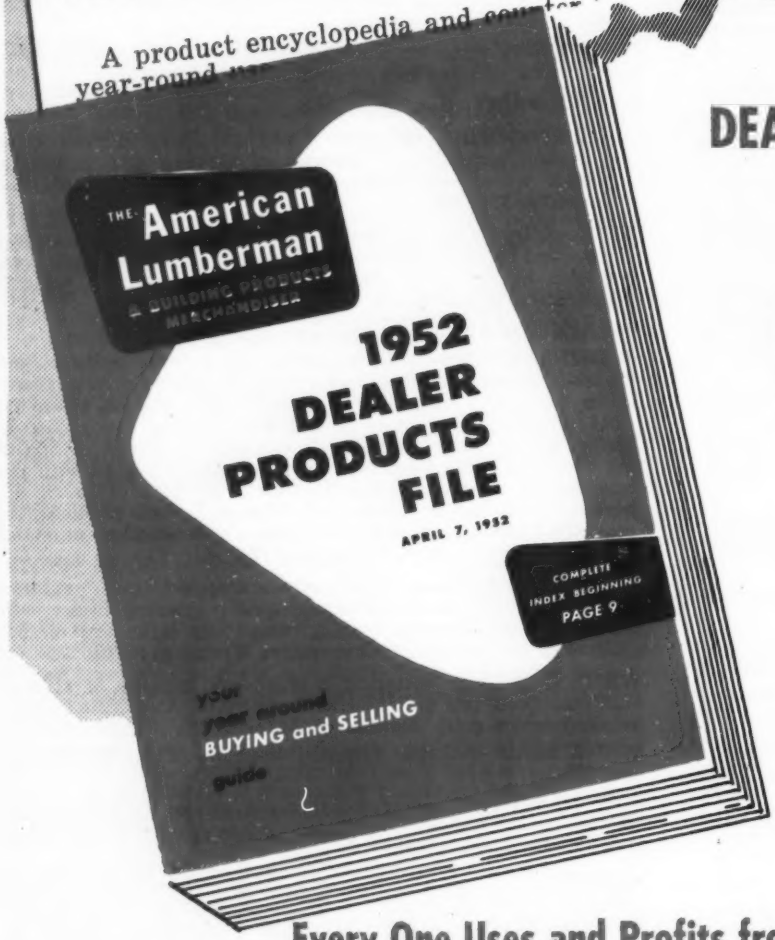
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Section 1 LUMBER

The photograph introducing this section notes a trend and illustrates the growing conviction of many alert dealers that lumber is an item with definite possibilities for profitable merchandising. This giant selector board which shows samples and market prices of lumber, is in the Peterborough (Ont.) Lumber Company, but you can see many similar displays now going up in other yards throughout the country.

These aggressive dealers realize that lumber retailing is actually in its infancy as far as creative selling is concerned. Looking at their business with complete realism, they know that preparation for war, war itself and the aftermath of war shortages provided artificial support for lumber marketing in the past twelve years and but that skilled merchandising must be planned for the future. Most of these dealers began their new approach to selling lumber by taking an inventory of the potential markets for the product.

They discovered that fundamentally there are eight major markets for lumber: 1, heavy construction; 2, industrial uses; 3, the new home market; 4, the farm market; 5, the improvement market; 6, the build-it-yourself market; 7, the home workshop market and 8, the stimulation of small businesses using wood.

Dealers generally, have already done a splendid job in the first four markets promotionwise, but the last four have been universally neglected. Let's examine these markets in terms of their selling potential.

THE IMPROVEMENT MARKET

This is the most important single source of new business for the lumber dealer, surprisingly enough even exceeding the new home market. Research indicates that the average dealer in a typical year gets about 30 percent of his business from the new home market, about 35 percent from the improvement market, about 20 percent from the farm market and 15 percent from miscellaneous markets. The improvement market, therefore, should be supported with displays, advertising and other sales efforts in proportion to this greater sales opportunity.

THE BUILD-IT-YOURSELF MARKET

Government authorities say that in 1949, 276,000 of the million odd homes built in that year were erected with the owner as the contractor. The trend to "sweat-equity" home construction seems to be growing in popularity in many areas. Able mechanics who want homes of their own are often employed but 38 to 40 hours a week and they have ample spare time to complete their own construction job. They work with other mechanic friends and build their own homes, calling in experts for only certain parts of the job like plumbing, heating and wiring. This market has tremendous potentialities for development with the dealer yard fabricating certain items for the consumer building his own home.

HOME WOODWORKING MARKET

As an indication of the possibilities for this market consider just one example. A Los Angeles hardware company sold 1500 small power saws to its customers in 1951 by consistent advertising and promotion. There are over 150 small items that can be built of lumber by the consumer in his own hobby workshop. They include professional-looking work benches, easy chairs, outdoor furniture, doll houses, play houses, living room furniture, etc. Dealers who have studied this market have remarked that it is quite different from a few years ago when an occasional what-not was about all the home-workshop enthusiast felt qualified to tackle. Modern power equipment and easy-to-use cutout paper patterns have encouraged budget-conscious young people to build even the most important pieces for their homes. It goes without saying that quality woodworking requires good wood that increases the profit return for the dealer.

SMALL INDUSTRY USING WOOD

Every large woodworking and cabinet shop in the country once was small. Today there once again is a definite need for more and more small cabinet shops to take care of the demand. Locally-made storage wall units, for example are increasingly popular because they can be delivered fully assembled and ready for installation. Custom-made furniture is another attractive field. Lumber dealers can increase their profits from this market by encouraging the growth of small woodworking and cabinet shops.

HARDWOODS AND SOFTWOODS

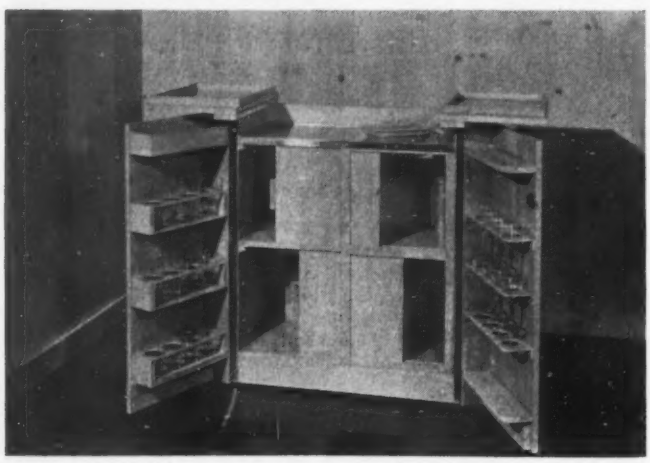
Lumber is produced from two broad classes of commercial trees — hardwoods and softwoods. Botanically, hardwoods are the broad-leafed trees (maple, for example) that shed their leaves in the winter, while softwoods, or conifers, are trees with needle or scale-like leaves (pine, for example).

The terms "hardwood" and "softwood" give the wrong impression, however, for some so-called softwoods are considerably harder than many hardwoods; and some so-called hardwoods—for example, cottonwood and bass-

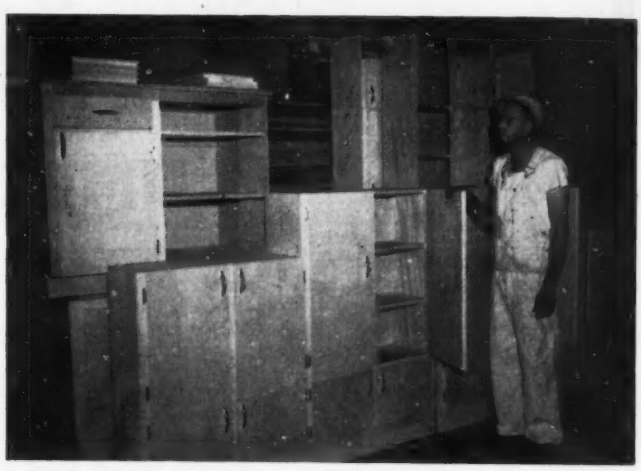
Four Growing Markets for Lumber

1. HOME improvement offers the dealer unlimited opportunity for profit and customer service in his community. Young homeowners often must do the work themselves because of high labor costs.

2. NEW homes built largely by the owner himself are numerous today. Dealers who give suggestions and sell yard fabricated parts will get their share of this market.



3. HOME workshops require large quantities of hardwood and plywood. This attractive furniture was built from a 50c pattern that sold hardwood plywood, plastic laminate, continuous hinges and other items retailing for $25.00.



4. SMALL cabinet shops are another source of new business for a variety of woods. Besides the usual kitchen cabinets they are now fabricating popular storage walls and custom made furniture.

wood—are as soft as the softest conifers. These terms have been in use so long, however, that their meaning is well established.

HOW LUMBER IS CLASSIFIED

Lumber is classified by (1) use, (2) size, and (3) extent of manufacture.

Classification by Use

1. Yard Lumber. This embraces the major quantity of lumber and includes those kinds used for general building purposes. Yard lumber consists principally of 2-inch dimension, timbers and inch boards used for siding, sheathing, subflooring, roof sheathing and miscellaneous purposes such as stepping, closets, shelving, interior trim, baseboards, etc. Yard lumber is graded on the basis of the intended use of the entire board for a given purpose rather than for further manufacture.

2. Factory and Shop Lumber. This is largely shipped from the sawmills directly to individual plants (including planing mills operated by retailers) for further manufacture. It is graded on the basis of the percentage of clear cuttings. Practically all hardwoods are intended for further remanufacture and many of the pines and Douglas fir are cut in 1" and 2" thicknesses for remanufacture into doors, framing, sills, sash, furniture parts and other similar products.

3. Structural Lumber. This is lumber two inches or more in thickness and 4 or more inches wide intended for use where working stresses are important. The grading of structural lumber is based upon the strength and use of the entire piece as such.

Classification by Size

Yard lumber is further classified by size as follows:

Strips—less than two inches thick and less than eight inches wide.

Boards—less than two inches thick and eight inches or more wide.

Dimension—lumber that is at least two inches but less than five inches thick of any width.

Timbers—five inches or more thick.

Structural lumber is further reclassified by size according to (1) dimension (which are sometimes known as joists and planks) consisting of lumber from two inches to but not including five inches thick, and four inches or more wide; (2) timbers five inches or more in least dimension. Timbers may be classified as beams and stringers 5 x 8 inches or larger, and posts and timbers which are square pieces 5 x 5 inches and larger and intended to carry longitudinal loads.

How classification by use and classification by size are used to grade softwood lumber is shown in the accompanying outline, "General Classification of Softwood Lumber." Grade names used by lumber manufacturers associations for the various classes of materials under the American Lumber Standards system are given.

As can be seen by the outline, yard lumber is broken down into two main quality grade divisions:

1. Select lumber.—Select lumber, according to the American Lumber Standards, is:

> Generally clear, containing defects limited both as to size and number, and smoothly finished and suitable for use as a whole for finishing purposes or where large clear pieces are required.

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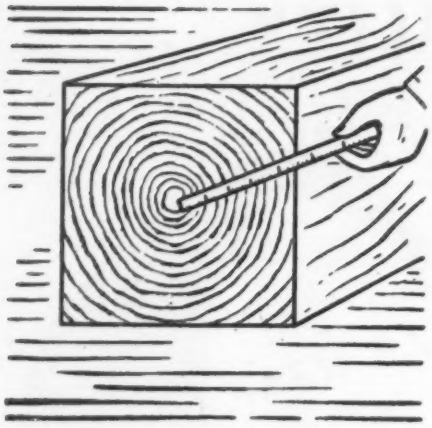


MEASURING the number of growth rings per inch, for "dense" and "close" grain.

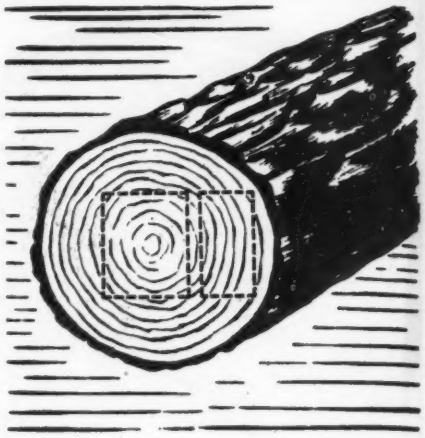


ILLUSTRATION at right shows where "side cut" and "boxed heart" are cut from a log.

Two classes of select lumber are provided:

(a) That suitable for natural finishes, graded as A and B.

(b) That having defects and blemishes of somewhat greater extent than (a), but which can always be covered by paint, graded as C and D.

2. Common lumber.—The American Lumber Standards specify common lumber as that having numerous defects and blemishes preventing its use for finishing purposes, but suitable for general utility and construction purposes.

Again, American Lumber Standards recognize two general classes:

(a) Common lumber which can be used as a whole for purposes in which surface covering or strength is required. All defects and blemishes in this classification must be sound. This class includes No. 1 and No. 2 common.

(b) Common lumber containing very coarse defects likely to cause waste in the use of the piece. This class includes No. 3, No. 4, and No. 5 common.

Dimension lumber is available only in the three upper grades No. 1, No. 2, and No. 3 common.

Classification by Extent of Manufacture

Lumber is classified according to the extent to which it is manufactured as follows:

Rough lumber—lumber that comes from the headsaw and has not been dressed by surfacing.

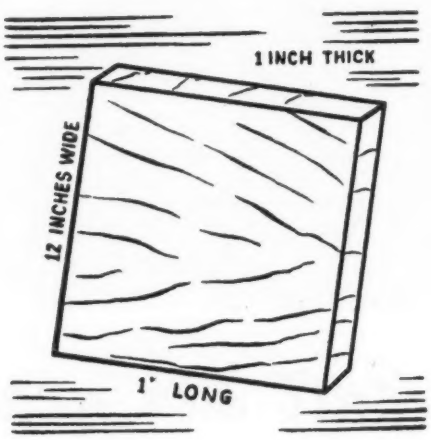
Surfaced lumber—lumber that has been dressed or planed by passing through a planer—it may be dressed one side, two sides, one edge, or a combination of sides and edges.

Worked lumber — lumber that has been run through a matching machine or moulder to provide machined lumber for flooring, or shiplapped lumber that is worked to provide a lapped joint along the edges, or patterned lumber that is shaped to a given pattern or mould.

Note: For each standard nominal thickness there is a recognized minimum in the surfaced or finished thickness for each size classification. For example, inch lumber dressed one or two sides must be at least 25/32" in thickness for the standard yard board. For the standard industrial board 13/16" or 26/32" dressed one or two sides is recognized as standard. Yard dimension of nominal 2" thickness shall be dressed to 1⅝", and for standard industrial dimension 1¾" thick. This applies whether the dimension piece is dressed one or two sides. In width, dressing shall not take more than ⅜" off lumber of a standard width of 3", ½" off for widths of 4" to 7" inclusive, and ¾" for widths of 8" to 12".

HOW LUMBER IS MEASURED

In the early days of lumber manufacturing lumber was cut into boards and dimensions, and was sold rough-sawn as it came from the saw. Despite the advent of the planing mill which dressed lumber to uniform thickness and size, the custom of figuring lumber on the rough-sawn size continued. The unit of measure of lumber—the board foot—is based on its rough-sawn size.



THE BOARD foot is a standard lumber measurement, and is one foot square and one inch thick.

How to Figure Board Feet

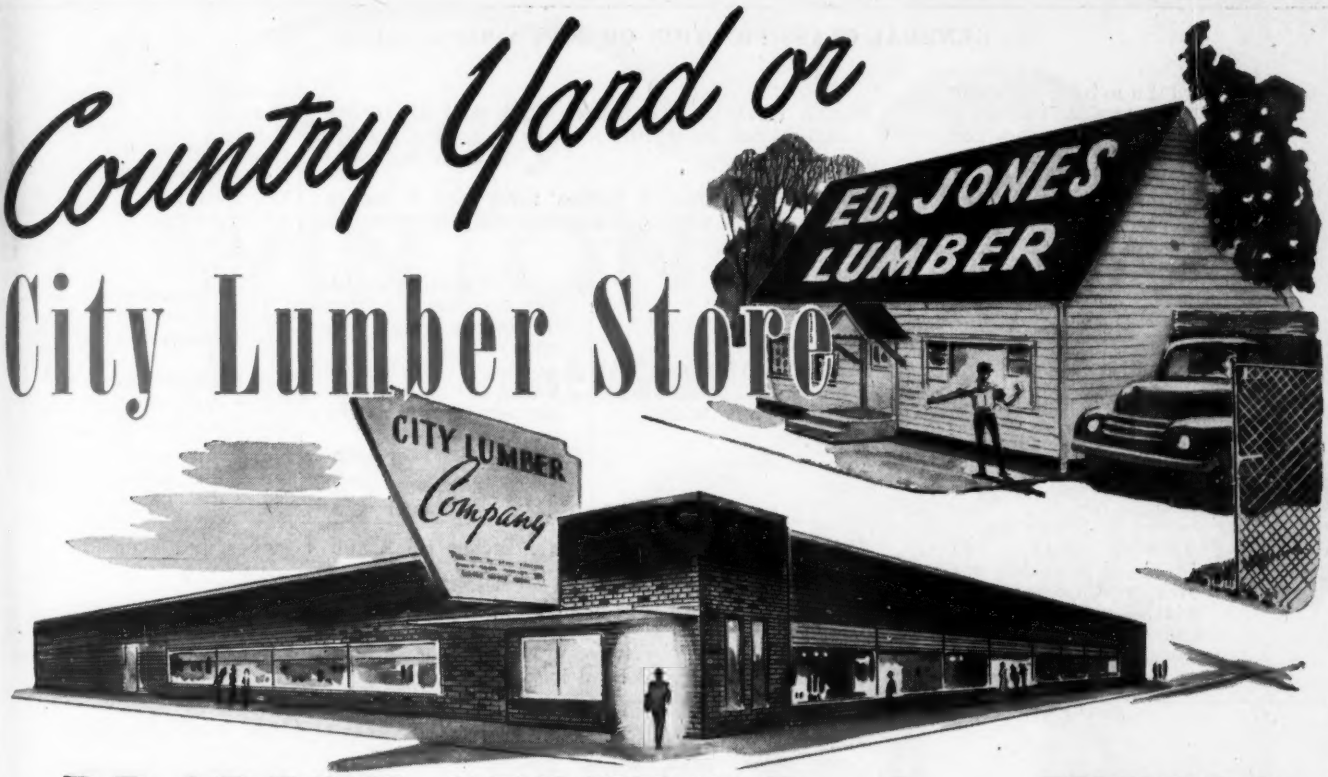
The board foot, or one square foot in area by one inch thick, is usually used in the measurement of lumber, except in the case of small material like moulding, which is sold by the running foot; shingles, which are sold by the square; or posts, poles, and similar materials sold by the piece.

For Lumber Less Than One Inch Thick: When the lumber is less than an inch thick the usual custom is to treat it in measurement as if it were an inch thick. In some cases, however, account is taken of the thickness when it runs below ⅞ inch. Usually, however, allowance is made in the price of such thin material rather than in the measurement.

For Lumber of Fractional Thicknesses: For material 1¼ or 1½ inches thick in the rough, the number of square feet of superficial surface is increased by ¼ and ½, respectively, to take account of the increased thickness. Similarly, for material 2½ inches thick the superficial surface is multiplied by 2½ to give the correct number of board feet.

For Dressed Lumber: The number of board feet in dressed lumber is usually based on the thickness of the board before planing; hence, boards ⅞ of an inch dressed are treated as one-inch material, and similarly boards 1⅛ inches thick are treated as 1¼ inches, the usual

Country Yard or City Lumber Store



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GENERAL CLASSIFICATION OF SOFTWOOD LUMBER

			Grades
Yard lumber (lumber less than 5 inches thick, intended for general building purposes; grading based on use of the entire piece)	Finish (less than 3 inches thick and 12 inches and under in width)		A select B select C select D select
	Boards (less than 2 inches thick and 8 inches or over in width). Strips (under 8 inches in width)		No. 1 boards No. 2 boards No. 3 boards No. 4 boards No. 5 boards
	Dimension (2 inches and under 5 inches thick and of any width)	Planks (2 inches and under 4 inches thick and 8 inches and over wide)	No. 1 dimension No. 2 dimension No. 3 dimension
		Scantling (2 inches and under 5 inches thick and under 8 inches wide)	No. 1 dimension No. 2 dimension No. 3 dimension
		Heavy joists (4 inches thick and 8 inches or over wide)	No. 1 dimension No. 2 dimension No. 3 dimension
Structural material (lumber 5 inches or over in thickness and width, except joist and plank; grading based on strength and on use of entire piece)	Joist and plank (2 inches to 4 inches thick and 4 inches and over wide)		
	Beams and stringers (5 inches and over thick and 8 inches and over wide)		
	Posts and timbers (6 by 6 inches and larger)		
Factory and shop (grading based on area of piece suitable for cuttings of certain size and quality)	Factory plank graded for door, sash, and other cuttings 1 inch to 4 inches thick and 5 inches and over wide	Factory clears upper grades	Nos. 1 and 2 clear factory No. 3 clear factory
		Shop lower grades	No. 1 shop No. 2 shop No. 3 shop
	Shop lumber graded for general cut up purposes	1 inch thick (northern and western pine, and Pacific coast woods)	Select Shop
		All thicknesses (cypress, redwood, and North Carolina pine)	Tank and boat stock, firsts and seconds, selects No. 1 shop No. 2 shop, box

amount taken off in dressing being about ⅛ of an inch. In the measurement of flooring the width of the board is taken in a similar manner; i. e., from the width of the original piece before trimming. It thus includes the full width of the board, including the tongue in tongued and grooved material. Where there is any possibility of misunderstanding as to the unit of measurement of lumber, the method to be used should be definitely agreed upon between purchaser and salesman.

The rule is:

Multiply together:

$$\text{Thickness in inches} \times \frac{\text{width in inches}}{12} \times \text{length in ft.}$$

Lumber of less than one inch thickness in rough sawing is figured as if it were one inch thick and the adjustment for its thinness is made in the price per thousand.

STRENGTH PROPERTIES OF LUMBER

In the construction of a dwelling house the strength of its timbers, joists, and studding is an important consideration. No definite rule can be laid down, however, as to the necessary size of each piece, for this varies with the size of the building, the type of construction, the length of the span, and the distance the supporting members are apart. The selection of proper dimensions is an engineering problem and should be left to a competent architect. A few suggestions, however, may be of value to the owner in inspecting his building or building material.

Density a Key to Strength

The strength of structural timbers, whether bending strength, as in joists and rafters; the side-crushing strength, as in sills and the end of joists; or the end-crushing strength, as in studding—is influenced by several factors. The density of the wood, as indicated by its dry weight, is a good indication of its strength. Heavy woods, like oak, yellow pine, and Douglas fir are much stronger than lighter woods, as white spruce and white pine. The density of the softwoods, and also the oaks and other ring-porous hardwoods, can be judged by the percentage of dense summer wood as seen on the smoothly cut end surface. For the softwoods, like yellow pine, tamarack, hemlock, and Douglas fir, the densest wood is usually found in pieces showing neither very slow growth nor very rapid growth. In the southern yellow pines and Douglas fir an average of six rings per inch, with an average of one-third of each ring summer wood, indicates excellent quality so far as strength is concerned. In general, for ring-porous hardwoods, as oak, ash, and chestnut, the wider the rings the stronger the wood. The home builder should be particularly careful that those timbers which have heavy loads to support be not of very wide or of extremely narrow-ringed softwoods, or very narrow-ringed hardwoods, unless they are larger than would be necessary for timbers of average rate of growth.

Sapwood as Strong as Heartwood

Whether a stick of timber contains much or little sapwood has no direct bearing on the strength. Other things being equal, sapwood is as strong as heartwood. Sapwood, as a rule, is less durable than heartwood, and, consequently, under conditions favoring decay it may soon be destroyed, weakening the structure correspondingly. If the wood is to be given a preservative treatment, sapwood is not objectionable, for it absorbs preservatives more readily than heartwood.

Direction of Grain

The direction of the grain should be parallel to the sides of a stick in order to afford maximum strength. Diagonal grain greatly reduces the strength of the wood.

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Winton is a time-tested producer. For 64 years Winton has been satisfying buyers — and never has Winton delivered finer lumber than today. Winton has the facilities — the "Know-How." Winton logs come from our own tree-farm. Winton grades are reliable. Winton values are unsurpassed.

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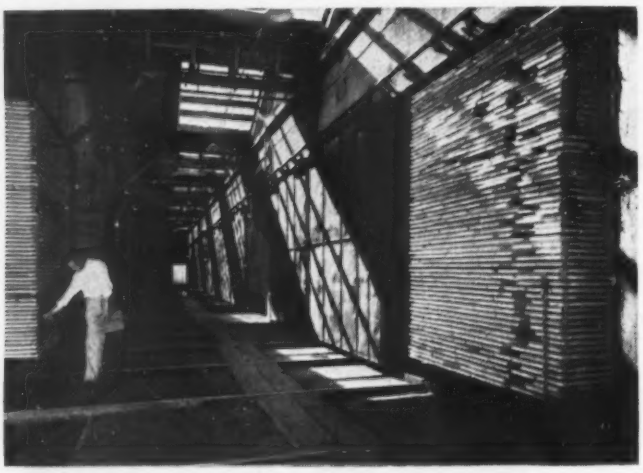

THE ABOVE shows a typical scene of a dry kiln and an air-drying yard.

DRYING OF LUMBER

After lumber is cut in the mill, possibly no other factor will so greatly increase its usefulness as proper seasoning. With the exception of timbers, practically all commercial lumber is seasoned either by the air-drying method or through the use of kilns. This is done for the purpose of:

1) Increasing its strength and stiffness.
2) Adding to its lasting qualities—more resistant to decay and insect attack.
3) Preventing shrinking and checking in use.
4) Minimizing stain.
5) Decreasing weight, resulting in lower freight and handling costs.

When lumber is freshly cut from the tree, it is literally saturated with water. As the lumber dries out, shrinkage occurs. This shrinkage should take place at the mill before shipment is made. After being properly dried and dressed to standard size or worked to pattern, it stays put in construction, because the moisture content of the lumber has been approximately stabilized with atmospheric conditions.

In the air-drying of lumber, correct stacking is extremely important. Rapid and efficient air-drying is dependent upon proper circulation of air through all parts of the stack. Improper stacking not only prolongs the drying process, but invites losses through checking, warping, and discoloration. Properly stacked lumber is usually sufficiently dry for shipment in from 60 to 90 days depending upon weather conditions.

The term **kiln-dried** means lumber dried in a kiln with the use of controlled heat, humidity, and air circulation. There is evidence that kiln drying of lumber was employed 3,000 years ago, so the practice is certainly not new.

Early kilns used wood as fuel, and were called **smoke kilns.** It is a great advance from these primitive smoke kilns to the modern progressive-type kiln with absolutely controlled heat, humidity, and circulation which permits rapid and uniform drying to specific percentages of moisture content while holding seasoning defects to a minimum. Correct stacking is also important to proper kiln drying.

Modern kiln drying, in addition to being far faster, has certain other advantages over air-drying. It accomplishes (a) greater reductions in weight by lower moisture content, (b) the production of lumber to any specific percentage of moisture content, and (c) the killing of stain or decay fungi or insects that may have infected the wood.

DETERMINING MOISTURE CONTENT

There are several ways to determine the moisture content of lumber. One of the most common is by the use of weight tables. This method can give a close approximation but is not specifically accurate to the exact percentage point.

Tables of weight have been developed for all species of commercial lumber. There is a remarkable standard of sameness by species, so a given number of feet of lumber of a particular species containing a given percentage of moisture, will always weigh approximately the same as any other like unit. There is, of course, a weight variation in species between hardwood and softwood, and this must be considered in such calculations.

The most accurate method of determining moisture content is by the use of a **moisture meter, or calculator.** There are a number of these electronic instruments available that when placed on a piece of lumber will immediately register the exact content of that particular piece. (See Section 25, Machinery and Equipment.)

STAIN PREVENTION

If lumber is properly handled and protected before and after kiln drying, stain can be entirely eliminated. Under very favorable conditions and through correct handling, ordinary air-drying may be accomplished without stain.

Such favorable conditions, however, are rarely found for air-drying, and in order to reduce stain in air-dried lumber, many manufacturers find it necessary to dip the green lumber in an anti-stain solution. While not 100% effective, these solutions are highly efficient and satisfactory.

STANDARD SIZES OF LUMBER

Conforming with the recommendations of the Lumber Industry as set forth in Simplified Practice Recommendations No. 16 published by the United States Department of Commerce.

Type of Lumber	Nominal Size Thickness	Nominal Size Width	Actual Size S4S At Comm. Dry Shp. Wt. Thickness	Actual Size S4S At Comm. Dry Shp. Wt. Width
Dimension	2 in.	4 in.	1⅝ in.	3⅝ in.
	2 in.	6 in.	1⅝ in.	5⅝ in.
	2 in.	8 in.	1⅝ in.	7½ in.
	2 in.	10 in.	1⅝ in.	9½ in.
	2 in.	12 in.	1⅝ in.	11½ in.
Timbers	4 in.	6 in.	3⅝ in.	5½ in.
	4 in.	8 in.	3⅝ in.	7½ in.
	4 in.	10 in.	3⅝ in.	9½ in.
	6 in.	6 in.	5½ in.	5½ in.
	6 in.	8 in.	5½ in.	7½ in.
	6 in.	10 in.	5½ in.	9½ in.
	8 in.	8 in.	7½ in.	7½ in.
	8 in.	10 in.	7½ in.	9½ in.
Common Boards	1 in.	4 in.	25/32 in.	3⅝ in.
	1 in.	6 in.	25/32 in.	5⅝ in.
	1 in.	8 in.	25/32 in.	7½ in.
	1 in.	10 in.	25/32 in.	9½ in.
	1 in.	12 in.	25/32 in.	11½ in.
Shiplap Boards	1 in.	4 in.	25/32 in.	3⅛ in. face
	1 in.	6 in.	25/32 in.	5⅛ in. face
	1 in.	8 in.	25/32 in.	7⅛ in. face
	1 in.	10 in.	25/32 in.	9⅛ in. face
	1 in.	12 in.	25/32 in.	11⅛ in. face
Tongued and Grooved Boards	1 in.	4 in.	25/32 in.	3¼ in. face
	1 in.	6 in.	25/32 in.	5¼ in. face
	1 in.	8 in.	25/32 in.	7¼ in. face
	1 in.	10 in.	25/32 in.	9¼ in. face
	1 in.	12 in.	25/32 in.	11¼ in. face

PROTECTED QUALITY
FROM FOREST TO YOU
When you buy from Hines, you get protected quality and expert service. Hines operates its own lumber mills—and every step of the way, from tree to you is managed by Hines. That's why Hines lumber is preferred by contractors and home owners.
EDWARD HINES LUMBER CO.
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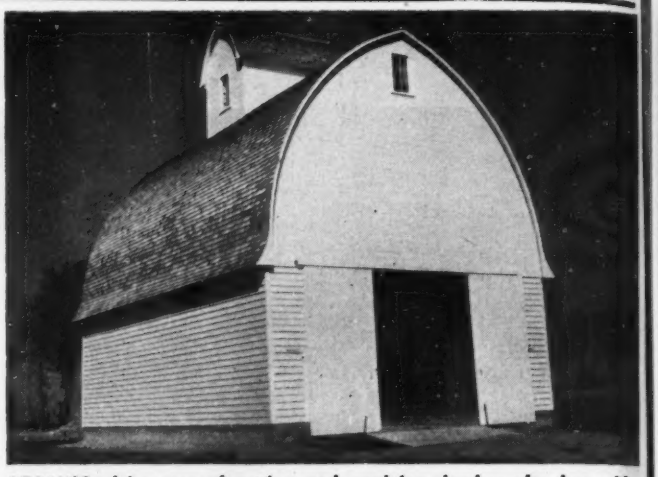
LUMBER as a framing and siding material in light construction is still the most popular of all building products. When properly installed, lumber will remain durable and efficient over an amazing span of years.



BECAUSE of its ease of cutting and applying, lumber also has widespread use in the construction of all types of farm buildings, a market that has great potential for the industry in the years ahead.

RESISTANCE OF WOOD TO DECAY

The length of time wood will remain free from decay (rot) depends on the conditions under which it is placed and on the kind of wood. Wood will not decay if kept thoroughly air-dry or if thoroughly saturated with water. Specimens have been taken from buildings several hundreds of years old in which the wood showed no signs of deterioration. Similarly, woods taken from the bottom of lakes or from old wells have been found sound after hundreds of years of submergence. Decay takes place most rapidly in wood kept damp and warm.

The sapwood of practically all woods is not durable and should never be used under conditions favorable for decay. In speaking of the relative durability of woods, the heartwood only should be considered. Woods in which the heartwood cannot easily be differentiated from the sapwood, on account of the light color of the heartwood, usually show relatively little durability, although Port Orford Cedar is a notable exception.

Except for the naturally-durable species (and it should be noted that only certain grades of even these woods are recommended as being resistant to rot fungus), lumber should be preservatively treated with an approved preservative and by a recognized process if it is to be used where it will be exposed to decay or termite attack. For further information on this, see the Wood Preserving division in this section.

ESTIMATING LUMBER REQUIREMENTS

Very frequently the dealer is called upon to estimate the amount of lumber that will be required to construct or remodel a house or farm building or some other structure.

In such cases, lumber requirements can be estimated on either the basis of the number of pieces needed, the lineal feet required or the board feet required.

Estimating by the Piece

It is estimated by the piece if:

a. each end rests on bearings that are a stated distance apart, or
b. a number of pieces are required that are the same length, or
c. a definite length is needed to cut without waste.

Estimating by the Lineal Foot

It is estimated by the lineal foot if the stock can be joined almost anywhere.

Estimating by the Board Foot

It is estimated by board measure where there is an area to be covered.

It is standard lumber practice that all fractional parts of a lineal or board foot of lumber are counted as another foot. All odd number of lengths of lumber are increased to the next even foot unless two pieces are coming into an even foot length of stock.

As can be seen in the table, "Standard Sizes of Lumber", listing the nominal sizes and the actual sizes of

IN INTERIOR finishing, lumber is fashioned into a number of attractive panel boards, made from a number of commercial species. These are made in both smooth and etched or grooved surfaces.

lumber, an allowance must be made in estimating to cover the dressed sizes of lumber. For example, to cover 100 square feet of surface requires more than 100 board feet of 6-in. dressed boards. A certain percentage must be added to each width of each kind of material to make up for this loss in dressing, shiplapping or matching. Then too, there is a wastage in cutting on the job by the carpenter which must also be taken in consideration. This wastage varies with each kind of material, where it is used and the method of applying it.

Finding Area, Perimeter, Cubic Content, Etc.

As estimating lumber requirements frequently calls for finding the area and perimeter of circles, the cubic content of excavations, etc., the following simplified formulas are listed for the dealer's convenience:

Volume—To find the cubical contents of an excavation, trench, etc., multiply the length by width by the depth or thickness. To find the cubical contents of a cylinder multiply the area of the base by the altitude. To find the cubical contents of a pyramid or cone, multiply the area of the base by one-third of the altitude.

Perimeter—The perimeter is the distance around a square or a rectangle. It is found by adding the length and width of the building and multiplying by 2.

The **circumference** of a circle (distance around a circular building)—multiply the diameter by pi (3.1416).

Hypotenuse of a triangle—the square root of the sums of the squares of two sides of a triangle.

Areas—Squares and rectangles—length multiplied by the width. Circular buildings — radius squared × pi (3.1416). Triangles—length of the base × ½ the length of the altitude.

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Since 1915 — customers have been writing and phoning their lumber problems to Wendling-Nathan knowing that the orders would be promptly filled. This reliability from order to invoice has been built on furnishing lumber buyers with the kind of lumber they want at a fair price.

You can spend a maximum amount of time selling lumber and a minimum of time buying it when you order your Western woods requirements through us. We will pay prompt attention to any inquiry.

Sincerely yours,

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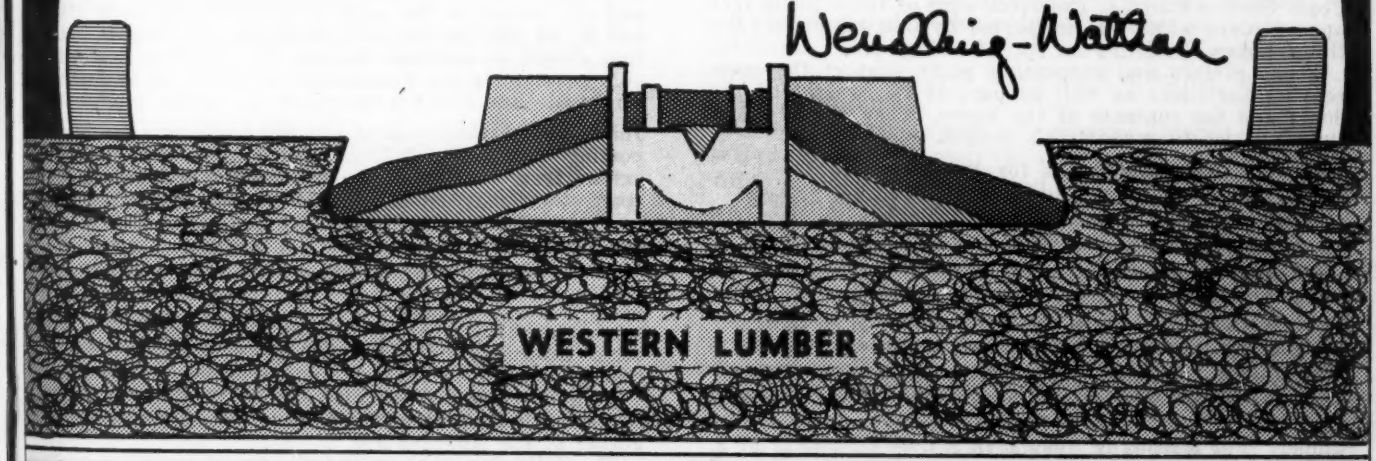

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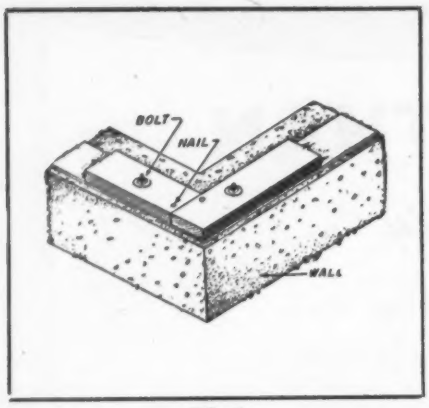

FIG. 1

SILL, adjoining pieces toenailed with two tenpenny nails.

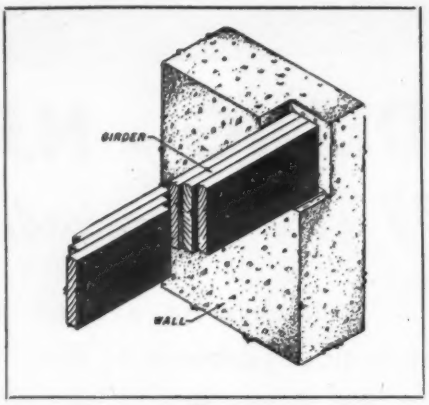

FIG. 2

THREE-piece girder. Nailed from each side with 20d nails, two near each end of each piece, others staggered with 32 inches between nails. Joints only at supports.

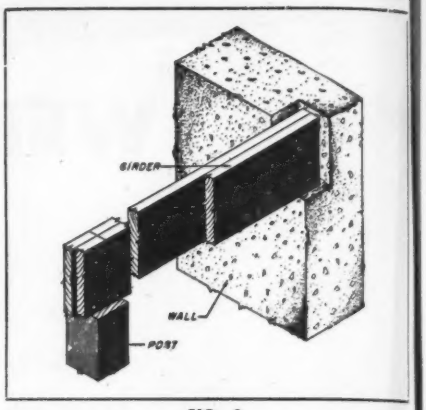

FIG. 3

TWO-piece girder. Nailed from one side with 10d nails, two in each end of each piece, other staggered. Girder toenailed to post with two nails.

DIMENSION

Wall Plates or Mud Sills—The wall plate is usually a 2x8 (a 2x6 may be used) and is carried around the entire wall of the building to serve as a base on which to rest the joist on the wall. It is sometimes bolted with anchor bolts which should be securely anchored in the foundation wall. (See Fig. 1) Usually it is embedded in mortar to level out any unevenness in the masonry and hence comes one of its names "mud sills." See House Cross Section Part 46.

To Estimate: The number of lineal feet in the perimeter of the foundation wall is the number of lineal feet of wall plates required.

Basement Beam or Girder—The outer ends of the joist which support the first floor rest directly upon the foundation wall. (See Wall Plates or Mud Sills). See House Cross Section Part 38. The inner ends of these joists rest upon girders which are supported by bearing posts. See House Cross Section, Part 33. (See Fig. 3.)

These girders and supporting posts support the main bearing partitions as well as part of the weight of the floors and the contents of the house. They should be of sufficient size to support this weight.

Maximum Spans for Wood Girders

Size in inches	1-story dwelling	1½- and 2-story dwellings
4 by 6	5 ft. 0 in.	4 ft. 0 in.
6 by 6	6 ft. 0 in.	5 ft. 2 in.
4 by 8	6 ft. 4 in.	5 ft. 6 in.
4 by 10	8 ft. 0 in.	7 ft. 0 in.
6 by 8	8 ft. 0 in.	7 ft. 0 in.
6 by 10	9 ft. 0 in.	8 ft. 0 in.

As a general rule basement beams, when made of wood, are 6x8, either solid (timber) or built up out of three pieces of 2x8. A built-up beam is stronger than a solid timber. For method of placing in a wall see Fig. 2 or 3.

Good construction practice requires that all joints of solid and built-up beams shall be made over the column supports. (See Fig. 3.)

The girders should be placed so that standard length joist can be used. A house of 24 feet in width would have the girder exactly in the center so that two spans of 12 foot joist could be used. For a 26 foot house the girder would be placed so that one span of joist would be 12 foot and the other 14 foot.

To Estimate: Take the size and length as listed on the plan.

The above presupposes that the girder is erected so that its top shall be level with the top of the outside foundation wall. This is known as a drop girder. See Fig. 2. The joist rest on top of the beam as in Fig. 6. Sometimes the girder is laid on the top of the foundation walls and the joist are framed into the side of the girder. This is called a flush girder and involves either the use of joist hangers or a ledger strip. See Fig. 5.

Box Sills or Header Joist—These are the same as headers and are placed at the outside end of joist as in Figs. 4 and 9. As the outside joist along the side of the foundation should be doubled, the amount of lineal feet of box sills required is the amount of the lineal feet of foundation wall. Box sills are the same size as the joist.

Joist—(First Floor) Joist are the horizontal beams supporting floors and ceilings; for short spans they may extend from one foundation wall to another, or, on longer spans they may have one end resting on a foundation wall plate (Fig. 4), and the other end resting on a girder. See House Cross Section Part 77. See Figs. 5 and 6.

Joist sizes, like girder sizes, are dependent upon the length of the span they bridge and upon the load they have to carry. Failure to use joist of sufficient size is sometimes the cause of sagging, squeaking floors that seem insecure under foot, rattling light fixtures, and cracked plaster in ceilings underneath.

In good construction joist should "lap" on the girder to give full support to the joist and should be spiked together at the lap. See Fig. 6.

The following table gives the maximum spans allowable by FHA. Maximum clear span means the distance between supports. Taking a 24' house, for example, two

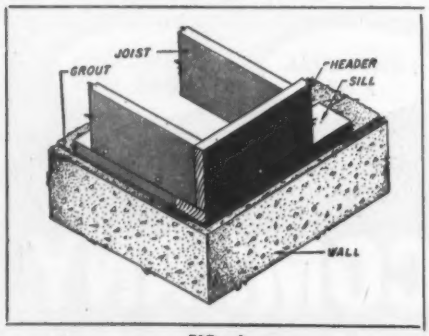

FIG. 4

HEADER joist nailed to other joists with 20d nails, three to end joist and two to others. End and header joist toenailed to sill 16 inches on center.

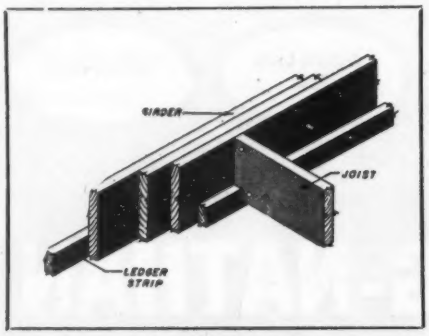

FIG. 5

JOIST notched over ledger strip. Joist toenailed to girder and to ledger strip with one 10d nail as shown or from opposite sides of joist.

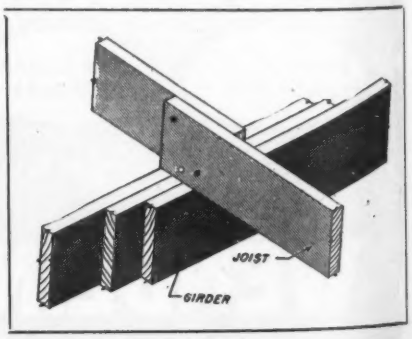

FIG. 6

JOIST bearing on girder or partition. Joists nailed with two 10d nails and toenailed to girder with one 10d nail on each side of pair of joists.

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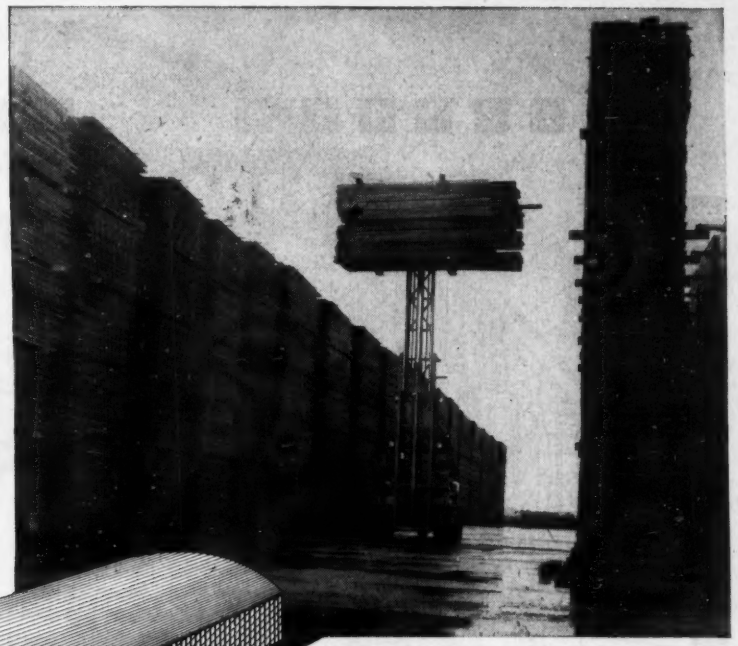
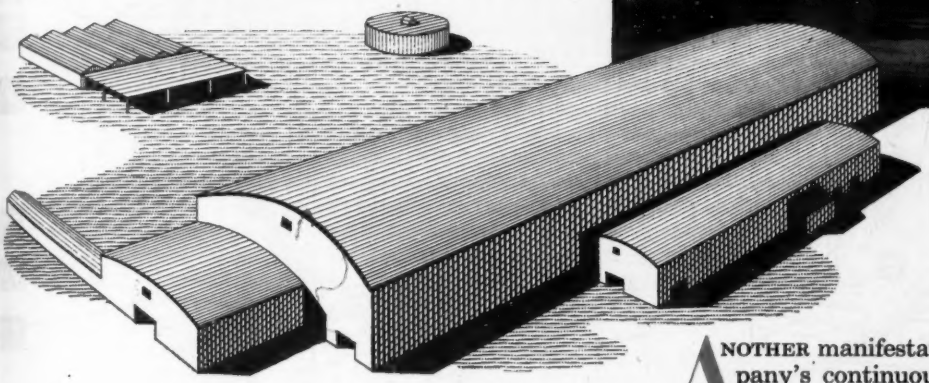
REDWOOD





Left: Sketch of Simpson's new large redwood storage and processing plant, Arcata, California. Above: Redwood stacked in Simpson's 15-acre drying yard.

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The QUALITY of Simpson Plywood, manufactured in the center of the Douglas Fir country, is known throughout the major distribution areas. All Simpson Douglas Fir Plywood is trademarked and carries DFPA grademarks.

DOUGLAS FIR AND HEMLOCK DOORS

Simpson Fir Doors, manufactured from mature Douglas Fir, are available in all areas in all FDI grades, all specifications and all designs including the Simpson Flush Door. The increasingly popular Simpson Western Hemlock Door is manufactured in all FDI patterns.

DOUGLAS FIR AND HEMLOCK LUMBER

From our forests and mills all grades and sizes of old-growth green Douglas Fir and Western Hemlock lumber is available, especially to the water-borne markets on the Atlantic and Gulf coasts.

REDWOOD LUMBER

Dry finished redwood lumber is cut and manufactured in all standard patterns for national distribution. Green redwood lumber is available for limited distribution.

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Simpson Acoustical Tile is available through authorized acoustical contractors and Simpson Noisemaster Acoustical Tile through regular distributors and dealers. These fine acoustical products are preferred because of high sound absorption and exclusive Hollokore drilled perforations.

INSULATING BOARD PRODUCTS

For maximum utilization of our timber resources, we convert small, sound wood pieces from our mills into Insulating Board Products including Interior Finish Board, Plank and Tileboard, Sheathing and Lath, Roof and Cold Storage Insulation and Acoustical Tile.

ANOTHER manifestation of Simpson Logging Company's continuous growth and progress is the completion of a modern new drying, storage and processing plant for redwood lumber at Arcata, California. Here, redwood from Simpson's timber holdings and sawmill at Klamath, California, is prepared for shipment.

This expansion is part of a steady growth which started in 1895, the year the company was founded. Simpson's logging, milling and manufacturing activities contribute to the stability of a large segment of the Pacific Northwest and Northern California which depend upon forest products for survival.

By means of good forest management, maximum utilization of timber resources and continuous reforestation, we can assure our customers of deliveries of forest products, manufactured to meet modern requirements, for many years to come.

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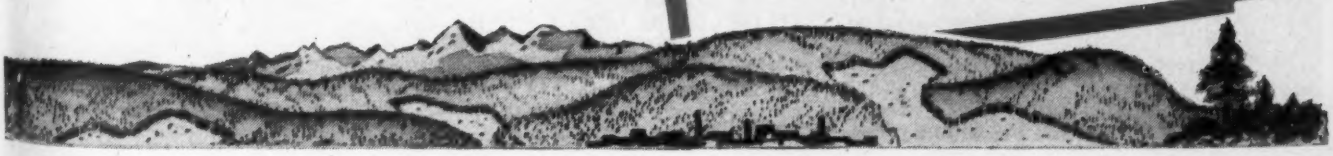

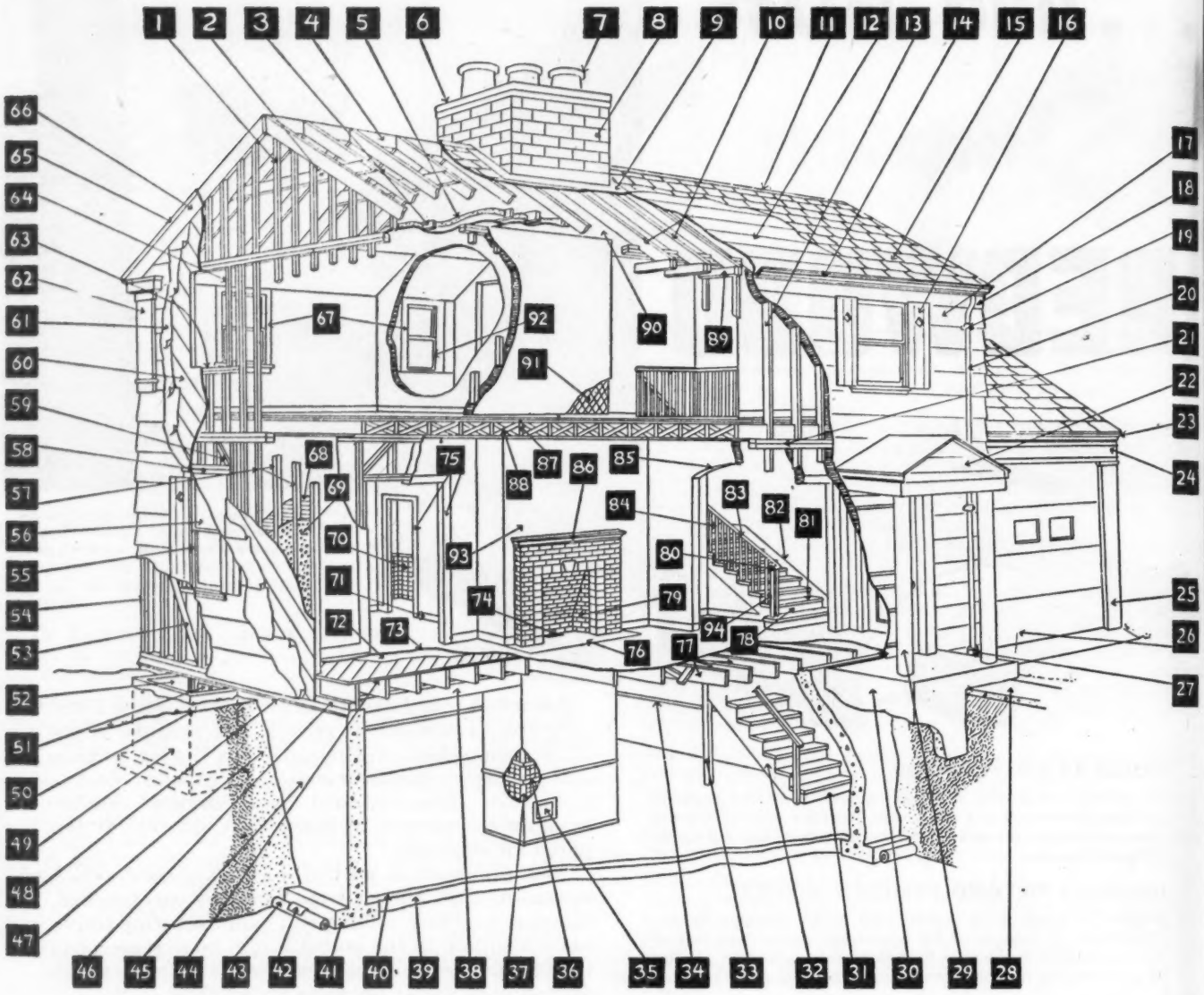

DESCRIPTION OF NUMBERED PARTS IN HOUSE CROSS SECTION

1—Gable stud
2—Collar beam
3—Ceiling joist
4—Ridge board
5—Insulation
6—Chimney cap
7—Chimney pots
8—Chimney
9—Chimney flashing
10—Rafters
11—Ridge
12—Roof boards
13—Stud
14—Eave trough or gutter
15—Roofing
16—Blind or shutter
17—Bevel siding
18—Downspout or leader gooseneck
19—Downspout or leader strap
20—Downspout, leader or conductor
21—Double plate
22—Entrance canopy
23—Garage cornice
24—Frieze
25—Door jamb
26—Garage door
27—Downspout or leader shoe
28—Sidewalk
29—Entrance post
30—Entrance platform
31—Basement stair riser
32—Stair stringer
33—Girder post
34—Chair rail
35—Cleanout door
36—Furring strips
37—Corner stud
38—Girder
39—Cinder or gravel fill
40—Concrete basement floor
41—Footing for foundation wall
42—Paper strip
43—Foundation drain tile
44—Diagonal subflooring
45—Foundation wall
46—Sill
47—Backfill
48—Termite shield
49—Areaway wall
50—Grade line
51—Basement sash
52—Areaway
53—Corner brace
54—Corner studs
55—Window frame
56—Window light
57—Wall studs
58—Header
59—Window cripple
60—Wall sheathing
61—Building paper
62—Pilaster
63—Rough header
64—Window stud
65—Cornice moulding
66—Frieze or barge board
67—Window casing
68—Lath
69—Insulation
70—Wainscoting
71—Baseboard
72—Building paper
73—Finish floor
74—Ash dump
75—Door trim
76—Fireplace hearth
77—Floor joists
78—Stair riser
79—Fire brick
80—Newel cap
81—Stair tread
82—Finish stringer
83—Stair rail
84—Balusters
85—Plaster arch
86—Mantel
87—Floor joists
88—Bridging
89—Lookout
90—Attic space
91—Metal lath
92—Window sash
93—Chimney breast
94—Newel

The facilities at our disposal for the manufacture of quality lumber from our extensive timber holdings means satisfaction for you and your customer. Recognized manufacturers of Long and Shortleaf Pine, Southern Hardwoods, Tidewater Red Cypress and African Mahogany, R-M gets the most and best quality from each log. You get DRY lumber — either AD or KD when you order from R-M. Complete planing mill facilities for dressing and resawing.

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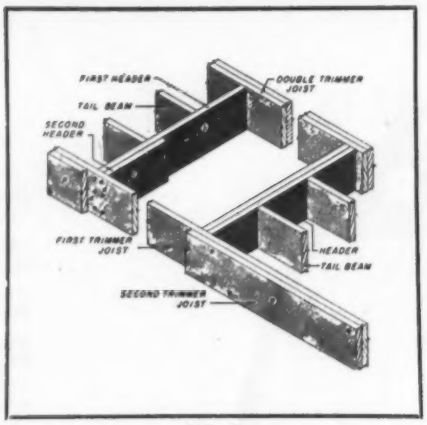

FIG. 7

THREE 20d nails through first trimmer joists into ends of first headers; same through first headers into ends of tail beams. Use 16d nails spaced 6" alternating near top and bottom to tie headers.

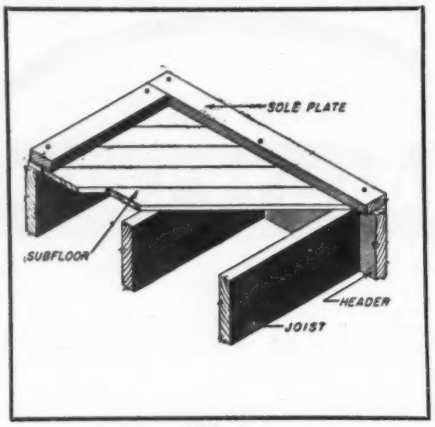

FIG. 8

SOLE plate. Nailed through subfloor to header joist and joist with 16d nails staggered. Sole plate over end joist nailed through subfloor to joist with 16d nails space 16 inches on centers.

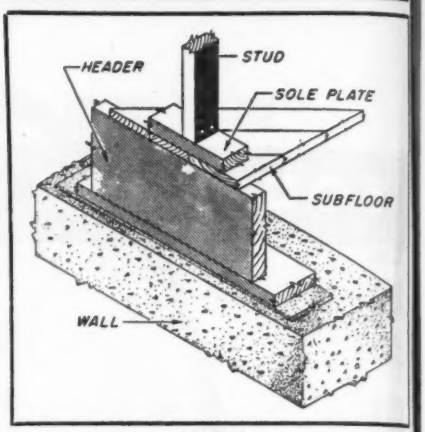

FIG. 9

STUDS. Toenailed to sole plate with two 8d nails on each wide face. Note: one nail on each wide face is sufficient if diagonal boards or plywood is used as sheathing.

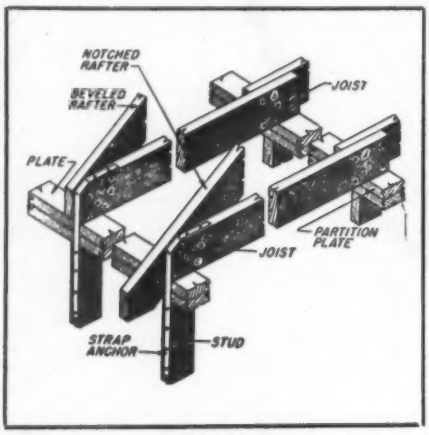

FIG. 10

RAFTERS and ceiling joist resting on wall plate; a. 5 10d nails through joist into rafter; b. overlap of joists at bearing with 5 10d nails; joist and rafter toenailed to plate with 4 10d nails.

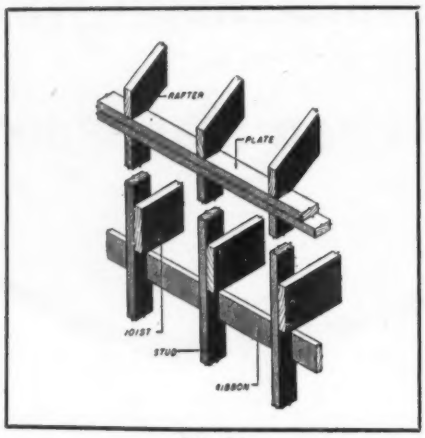

FIG. 11

JOIST bearing on ribbon. Joist nailed to each stud with five 10d nails. When there is a full story above, two instead of five nails will be sufficient since ceiling joist will be available.

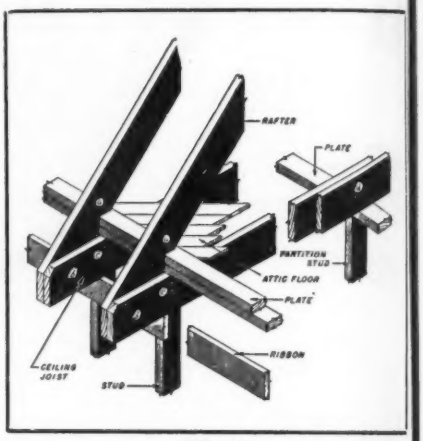

FIG. 12

RAFTER nailing; a. rafter toenailed to plate with 1 10d nail; b. five 10d nails join rafter and joist, c. joist and stud and d. overlap of joists.

sets of 12′ joist would be figured. If one end rested on the 2x8 wall plate and the other end rested on a 6x8 girder, the clear span between the two edges of the plate and the girder would be approximately 11′2″.

Size of Joist	Spacing	Fir and Yellow Pine
2x6	12″ oc	10′0″
2x6	16″ oc	9′1″
2x8	12″ oc	13′3″
2x8	16″ oc	12′1″
2x10	12″ oc	16′8″
2x10	16″ oc	15′3″
2x12	12″ oc	20′1″
2x12	16″ oc	18′5″

To Estimate: The size of the joist is usually marked on the plan. The number of joist required 16″ oc is ¾ the number of feet in the run plus one. Add for joist to be doubled under partitions.

Headers, Trimmers and Tail Joist—These are terms used to describe the joist members around an opening that has been cut through the floor construction, such as openings for chimneys, fireplaces, and stairways. Where an opening is cut into floor construction and the header cuts two or more of the main joist, the adjoining joist (the ones supporting the header) should be doubled.

Second Floor Joist—If the house is a two story house the estimating is done just the same way as the first floor was done. See House Cross Section. Of course, the second floor does not have wall plates and these are eliminated from the list of material. In platform construction in a certain locality, FHA requires that the second floor joint be headed in the same manner as the first floor, and of course good construction would have the outside wall joist on second floor to be doubled, so it would be necessary to include box sills in the estimate on the second floor.

In a story and a half house with an unfinished attic—if there is a stairway leading up it—FHA presupposes that some day it will be finished and requires that the size of the joist be used to carry the loads required in finished floors. However, if there is just a scuttle hole to the attic space, ceiling joist sizes may be used.

To Estimate: Follow rules for first floor with length determined by closet bearing partition.

Ceiling Joist—Where the attic is to be used for only light storage (see above) or is not to be used at all, ceiling joist may be lighter than other floor joist. See House Cross Section Part 3. Where economy is of first importance, it might be possible at times "to get by" with 2x4 ceiling joist for short spans, but good construction calls for a minimum of 2x6. See Figs. 10 and 12. Ceiling joist should run so as to form a tie for the roof.

FHA Requirements for Ceiling Joist

Size of Joist	Spacing	Fir and Yellow Pine
2x6	12″ oc	16′7″
2x6	16″ oc	15′4″
2x8	12″ oc	21′8″
2x8	16″ oc	20′2″
2x4	12″ oc	9′4″
2x4	16″ oc	8′1″

To Estimate: ¾ the length of the run plus one will give the number of ceiling joist required in each span.

Outside Wall Plates—On the outside perimeter of the building is laid a single 2x4 known as the sole plate or shoe on which the outside wall studding are spaced and

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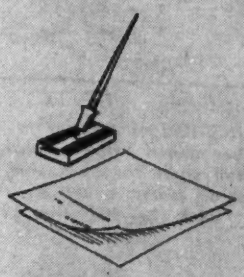

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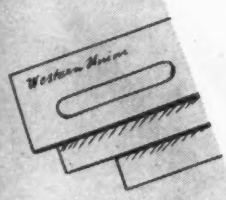

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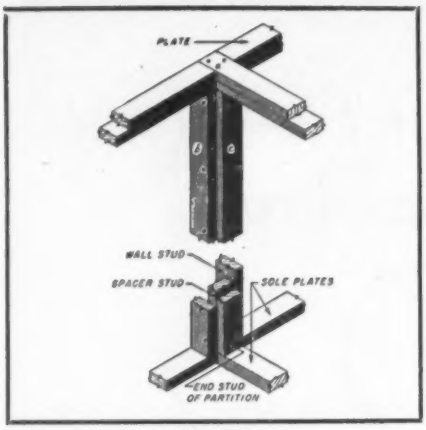

FIG. 13

CONNECTION of partition to wall; a. upper member nailed to lower with 2 16d nails; b. wall studs to space stud with 16d, 12 inches on center; c. end stud to spacer stud with 10d, staggered 12 inches.

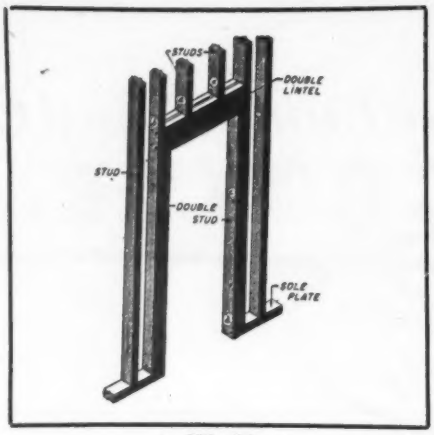

FIG. 14

DOOR opening; a. studs toenailed to lintel with 1 10d nail; b. long studs nailed to lintel with 2 10d nails; toenailed to plate with two 10d nails; c. double stud nailed with 10d, spaced 16"; d. studs to soleplate with two 10d nails.

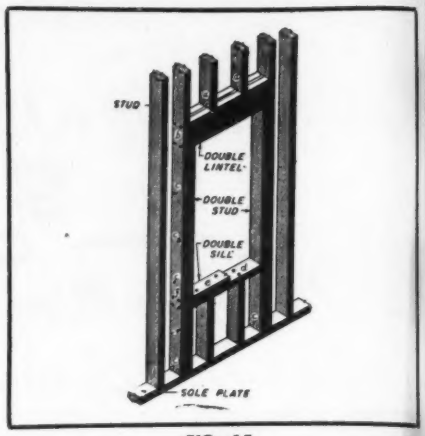

FIG. 15

WINDOW opening; a. studs above toenailed to lintel with one 10d nail; b. long studs nailed to ends with 2 10d nails; c. double studs nailed with 10d nails spaced 16 inches, staggered; d. lower part of sill nailed to stud with 2 10d nails; e. upper part of sill nailed to lower with 10d; f. studs along opening nailed to sill with two 10d nails.

nailed. See Fig. 8. Plates should be spiked through the subfloor and into the joist wherever possible. See Fig. 9. On top of the studding are nailed two more 2x4 plates, known as the cap plate and the tie plate (See Figs. 10, 11 and 12), which hold the studding into position and tie them together. These top plates or tie plates should always be lapped (See Fig. 13) and spiked at the corners with 16d com. nails.

To Estimate: Three times the number of lineal feet in the perimeter of the building is the number of lineal feet of 2x4 required for outside wall plates.

In two story houses where platform framing is used, two sets of outside wall plates will be used.

Outside Studding—The length of the outside studding may be ascertained by measuring the distance between the sole plate and top plate. See Figs. 14, 15 and 16. Most estimators use the rule of "one stud to the foot" or one stud per lineal foot of outside wall. For example a 24x30 house would have 108 lineal feet of outside wall and, according to the above rule, would require 108 studs. However, dividing 108 feet into 16" spaces would require but 81 pieces. The difference of 27 studs is supposed to take care of the triple corner posts (See Fig. 9) and doubling at all openings. Many times the above allowance for doubling is not enough. Generally included are 8 lineal feet of 2x6 and 14 lin. feet of 2x4 as a part of each outside door and window unit to help overcome these shortages. See House Cross Section Parts 13-29.

Headers over all openings shall be doubled and shall be set on edge (See Figs. 11 and 12). Spans for headers shall not exceed the following for size given.

Spans up to 4 feet.....two 2x4's
Spans 4 ft. to 5½ ft.....two 2x6
Spans 5½ ft. to 7 ft.....two 2x8
Spans over 7 feet.....two 2x10

Partition plates and studs—Plates are important because they help tie a building together and, for that reason, the top plates should be doubled (see above) and all joints should be square and true with the plates securely spiked to the studs. Wherever a partition wall joins an outside wall, the two top plates should lap one over the other, to tie the partition and wall together. See Fig. 13.

To Estimate: Three times the lineal feet of partitions will be the number of lineal feet of 2x4 plates required. Allow one stud for every lineal foot of partitions.

Gable End Studs—The length of gable end studs is determined by measuring the distance between the top of the plate and the peak of the roof. See Fig. 17. See House Section Part 1.

To Estimate: One-half the number of feet in the width of the gable is the number of studs required.

Knee Walls—While knee walls are found in the attic and are supports for roofs, in reality, they are partitions.

In roofs where the span of the rafter is unusually long and the size of the rafter is not adequate, a knee wall is erected to help support the roof. The knee wall is usually located so as to provide a 5 foot sidewall on either side

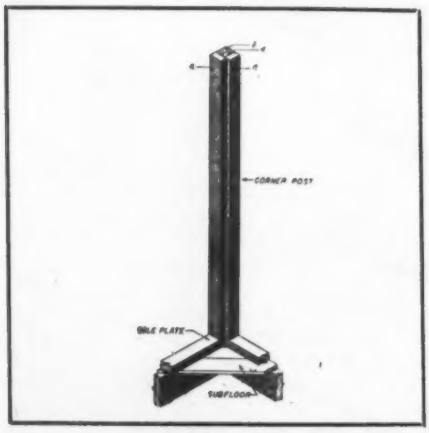

FIG. 16

CORNER post. Stud (a) nailed to studs (b) and (c) with 10d nails staggered 12 inches and to each filler block (d) with one 10d nail. Post nailed to sole plate with two 8d nails on each face.

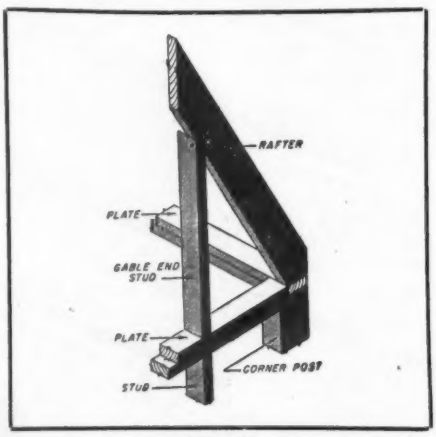

FIG. 17

BEVELED gable stud. Rafter toenailed to stud and stud nailed to rafter with 10d nails.

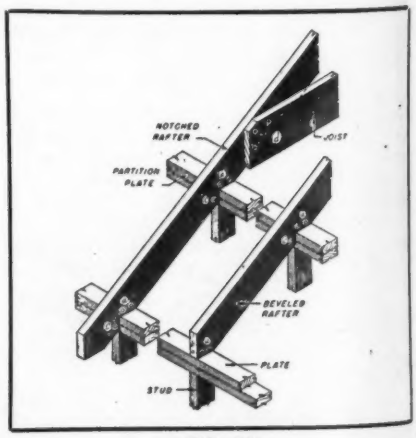

FIG. 18

RAFTERS notched or beveled at wall plate and notched over partition plate with ceiling joists above partition plate; a. rafters to plate with 2 10d; b. beveled rafter to plate with 1 10d; c. notched rafters to outer edge of plates with 1 10d nail on each side; d. ceiling joist to rafter with 5 10d nails.

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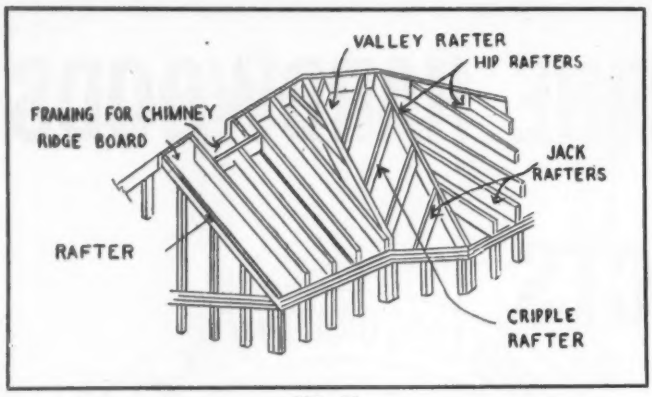


FIG. 19

THE ABOVE drawing shows framing procedures for valleys and chimney openings. Chimney openings should be double framed, with at least two inches clearance between framing and chimney

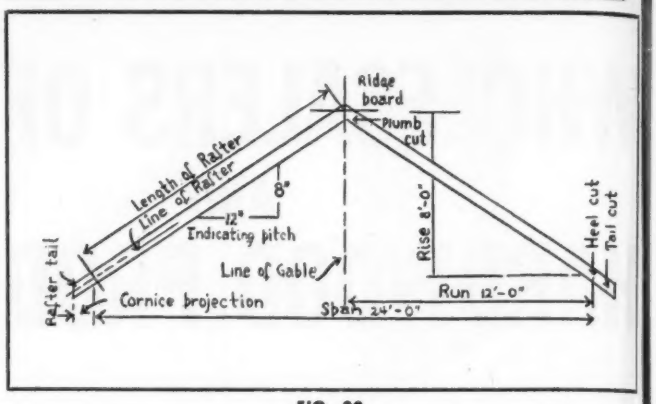


FIG. 20

THIS drawing gives the correct nomenclature for the various members that make-up a rafter assembly. From this it is easy to understand how pitches are figured in house construction

of the attic. It is constructed with a single sole plate and a double top plate, and the required spacing of the studs is marked on the plan. See Fig. 18.

To Estimate: Follow the same rules as for partitions, or follow the spacing as specified on the plan.

Bracing—In good construction the corners of a frame building should be braced. A 1x4 piece, let in flush with the face of the stud and running diagonally from the upper outside corner to the lower plate, is recommended. See House Section 53. Or short pieces of 2x4 can be cut between the studs runnings in a straight line from the upper corner to the lower plate. A set of braces should be used for each story and, if the openings in the exterior wall interfere with the braces, they should be as long as possible from the corner of the lower plate, just missing the window opening. Only when wood sheathing is placed on a building at an angle of 45 degrees, will FHA allow the elimination of bracing. Diagonal braces increase the strength of sheathing three and one-half times and its stiffness two and one-half times. See House Cross Section Part 53.

Rafters—Roofs give most estimators more trouble than any other part of a building. However Fig. 20 makes it possible to understand what the terms in roof construction mean. Roof pitches are explained in Section 9.

The notch cut in the rafter so that it will rest squarely on the plate is called the "heel cut." The cut that fits against the ridge board or opposite rafter is called the "plumb cut." The cut at the bottom end of the rafter is called the "tail cut." The end of the rafter projecting beyond the face of the wall is called the tail of the rafter.

Fig 19 illustrates the different kinds of rafters commonly used in roof framing. For a plain roof having just two sides, the rafters would be called "common rafters" and the roof called a gable roof.

If all four sides sloped towards the center point, it would be called a "hip roof" and the four corner rafters would be "hip rafters." A "valley" rafter is used where two roofs intersect to form a valley. A short rafter from the hip rafter to the plate, or from the ridge to a valley rafter is called a "jack rafter." The short rafters that run from a hip rafter to a valley rafter are sometimes referred to as "cripple rafters." Dormers may be gable, hip, or lift type. See Dormers in Index. A flat roof is referred to as a deck.

Rafters must be of sufficient size and strength to support the weight of the roof, to carry the snow load, and to resist wind pressure without sagging. If the rafters are undersized or spaced too far apart, they will sag. This sagging will loosen the shingles and cause a leaky roof. The size and spacing of rafters is dependent on the span and pitch of the roof. The following table gives the size and spacing required by FHA in the central U. S.

Size of Rafter	Spacing	Fir and Yellow Pine
2x4	16" oc	8'-1"
2x4	24" oc	6'-6"
2x6	16" oc	12'-6"
2x6	24" oc	10'-3"
2x8	16" oc	16'-7"
2x8	24" oc	13'-8"

To Estimate: Common rafters: to be the size marked on the plan. The number will be 1½ times the length of the ridge in feet. If this results in an odd number, add one to make it even. The length of the rafter can usually be scaled on the plan. If impossible and the pitch raft factor is known, you may work out its length from the following table:

Pitch	Rise per foot of Run	Length Common Rafter	Hip and Valley Rafter
1/4	6"	Run x 1.118	Common Rafter + 34%
1/3	8"	Run x 1.202	Common Rafter + 30%
5/12	10"	Run x 1.302	Common Rafter + 26%
1/2	12"	Run x 1.414	Common Rafter + 22%
7/12	14"	Run x 1.537	Common Rafter + 20%

Add for projection of rafter over eave.

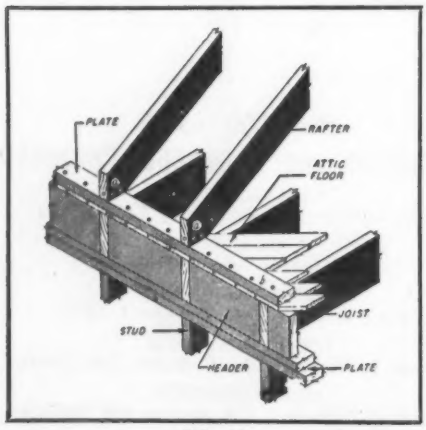


FIG. 21

BEVELED rafters resting on plate; a. rafter toenailed to plate with 5 10d nails; b. plate nailed to each joist with 1 16d and to headers or header joist with 16d nails spaced 4" on centers.

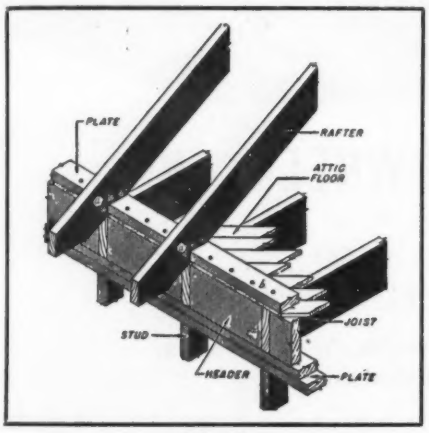


FIG. 22

NOTCHED rafters resting on plate; a. rafters toenailed to plate with 2 10d nails on each side; b. plate nailed to joist with 1 16d and to headers with 16d nails spaced 4 inches on centers.

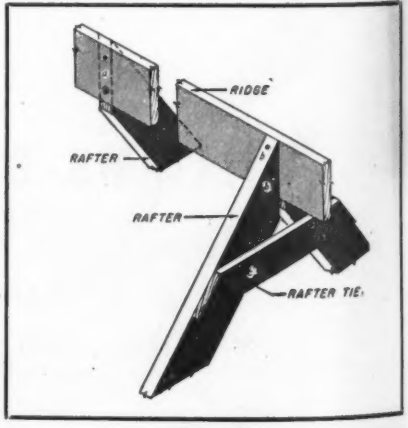
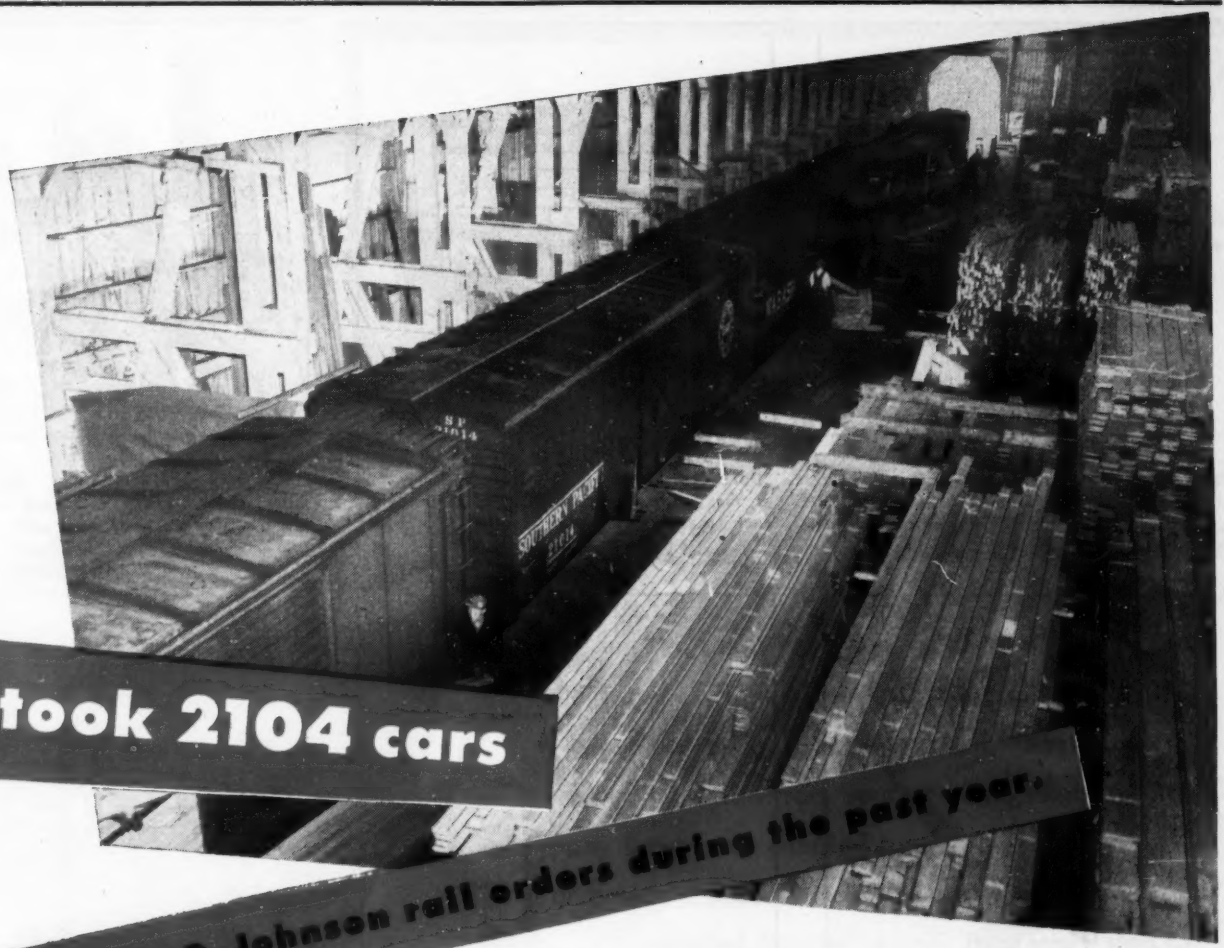


FIG. 23

ROOF peak; a. ridge nailed to first rafter with two nails; b. second rafter nailed through top edge to ridge with one 10d and toenailed to ridge with one 10d; c. rafter toenailed to rafter with 4 10d.



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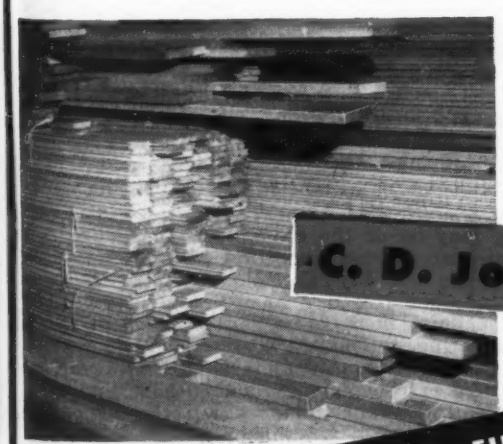

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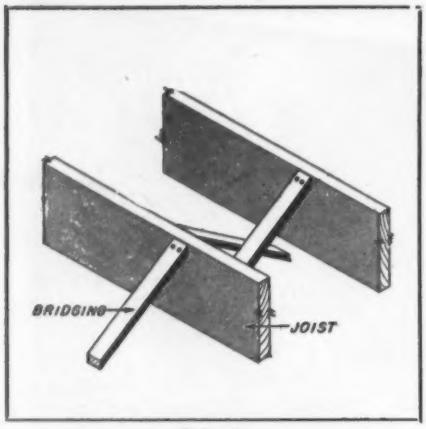


FIG. 24

BRIDGING, each piece of bridging nailed at each end with two 8d nails; nailing of bottom ends deferred until after placement of subfloor.

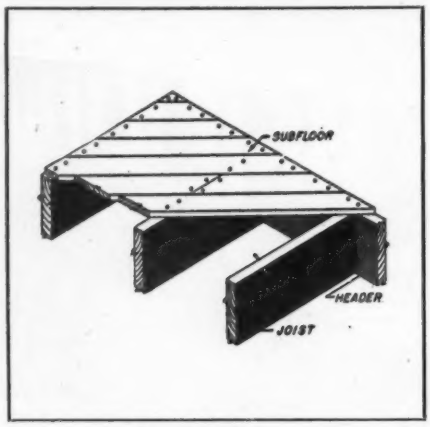


FIG. 25

SUBFLOOR or attic floor, boards six inches or less wide nailed with two 8d nails at each crossing of framing member; preferably no cracks between boards.

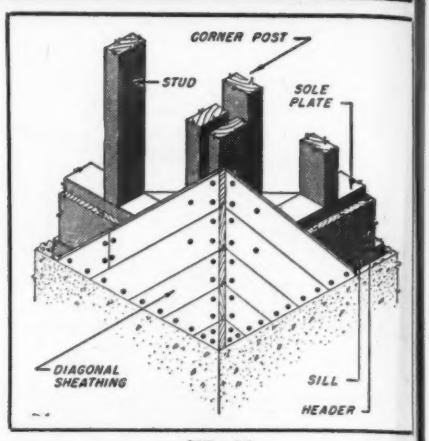
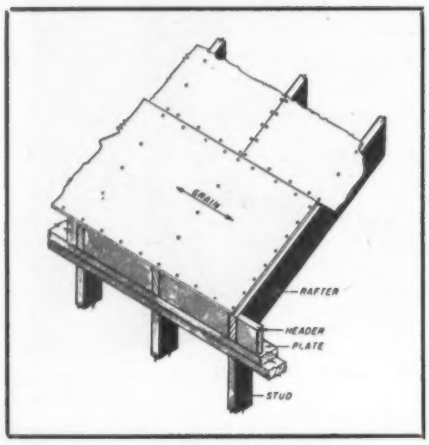
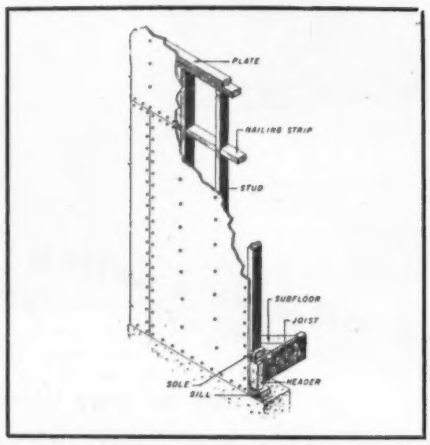


FIG. 26

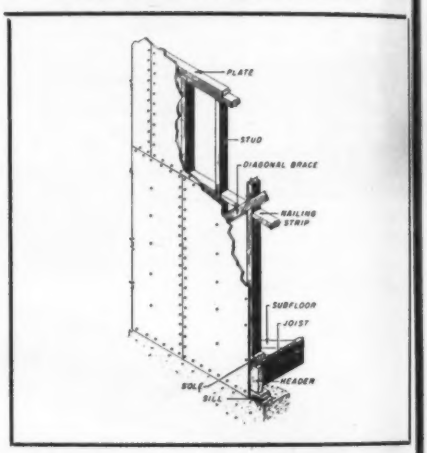
DIAGONAL wall sheathing. Use 8d nails. For boards 8 inches and less in width, use 2 nails at each end, 2 through each board and 3 through board into corner post. For wider boards use additional nail.



PLYWOOD roof sheathing: Nail around edges with 8d nails spaced 5", and to intermediate rafters with 8d nails spaced 10".



PLYWOOD wall sheathing: Plywood less than ½" thick, nail with 6d nails spaced 5" along edge and 10" on intermediate members. Plywood ½" and thicker use 8d nails, same spacing.



FIBERBOARD wall sheathing: Use 8d rust resisting nails spaced 6" around edges and 10" on intermediate members. Vertical joints should not be on the same stud in succeeding rows.

Hip rafters: to be the size marked on the plan. Their length may be determined from the above table. Count the number of hips in the roof to ascertain the number required.

Jack Rafters: should be cut from the same size and the same length of material as common rafters. The number of pieces required to cut all jack rafters is equal to 1½ the width of the building plus 2.

Valley Rafters: to be the size marked on the plan. FHA requires that the width of the valley rafter shall not be less than the cut end of the abutting rafters. So, in some cases, the valley rafter will be 2" wider than the rafter. Use above table to ascertain correct length. Count on the plan the number of valley rafters required.

Hips and Valleys—A cut-up roof with hips and valleys will require more material than a plain roof of the same area, because of the cutting waste of materials that results. Most estimators allow 1 sq. ft. extra for each lineal foot of hips and valleys in a cut-up roof.

Collar Beams or rafter ties—As marked on the plan—usually 1x6 or 2x4 securely spiked on each alternate pair of roof rafters. Scale length on plan and list number and size. See House Cross Section Part 2. Fig. 18.

Ridge Board: May be of 1x6 and the length indicated on the plan. FHA requires that the ridge board on hip roofs be of 2" material and that its width shall not be less than the cut end of the abutting rafters. See Fig. 23.

SUB-FLOORING, WALL AND ROOF SHEATHING, BRIDGING, FURRING

Subflooring—Most finish floors are placed on the top of a subfloor. Subfloor boards are placed diagonally across or at right angles to the floor joists. A subfloor increases the strength of a building, helps keep the joists even and in alignment, and holds the floor level, prevents the movement of dust and drafts between floors, helps deaden sound, acts as insulation and provides a working place for craftsmen during construction. Most important, it provides a solid base to receive the finish floor. See Fig. 25.

Subflooring may be of the economical board grades of lumber as appearance is not important. In fact, knot holes in subflooring are not objectionable. Subflooring should be seasoned and should be dry when put in place and before laying the finish floor, to prevent subsequent shrinking from disrupting the finish floor. Where the boards have served double duty as foundation form work, they should be redried before placing them in the building. A house can be built without subfloors, but the obvious advantages make the use of a subfloor a universal recommendation. It should be used in all cases when thin finish floors are installed or short length flooring is used.

Subflooring placed diagonally across the floor joists requires a little more time to lay, but produces a stronger structure and permits finished flooring to be layed in any direction.

Subflooring should be thoroughly cleaned of all dirt, plaster, residue, or any other foreign material before the finish floor is applied. All loose nails should be driven down and cups or ridges smoothed out.

Since the floor assembly of the average wood home consists of layers . . . subflooring, paper and finish flooring, square-edge boards for subflooring are satisfactory. The use of matched (tongued and grooved) or shiplapped material for the subfloor is not necessary. The paper stops draft and dust and matching or lapping does not add to

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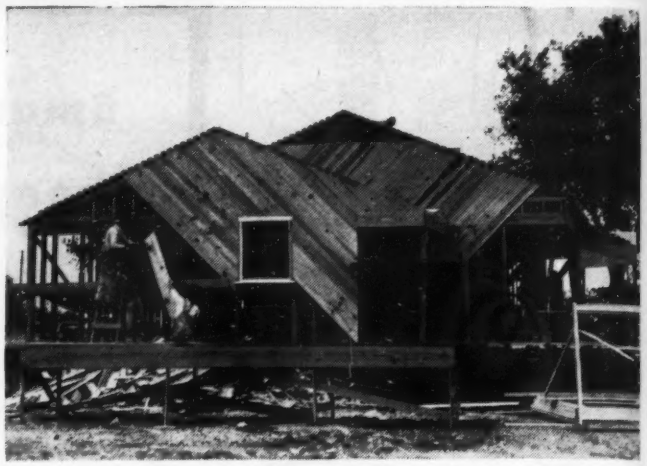

WOOD roof decking and sheathing is being applied to the above houses. Boards may be square-edged, tongued and grooved, end matched, or shiplapped. Sheathing is applied either horizontally or diagonally as is shown above.

the insulating value of the assembly. Finish floor will be smoother when its base (the subfloor) is also smooth. The subfloor should be free of cups, bulges, humps or any other irregularity. Subflooring boards should be well nailed to each joist with two eight or ten-penny nails. If the boards are more than six inches wide, three nails should be used. Plenty of nails tightly drawn is the best insurance against a squeaky floor. Nails do not rust in a wood floor. In all cases the joints should be directly on the joist and the full width of the boards.

To Estimate: To the area to be covered
add 1/6 for 6" boards laid at right angles to the joist; add 1/5 for shiplap or 1x6 D&M.
add 1/5 for 6" boards laid diagonally to the joist; add ¼ for shiplap or 1x6 D&M.

Sheathing—As soon as the studding is up, the exterior sheathing may be applied, as the sheathing will keep the building plumb and square. Various kinds of sheathing, other than wood sheathing, are now on the market—insulation board sheathing, gypsum boards of different kinds, and plywood. Sheathing is a structural part of a house, as it is the part to which the outside finish surface is attached whether it be brick veneer, wood siding, asbestos or wood shingles, or any other finish form.

Wood sheathing ordinarily consists of boards of standard lumber grades applied horizontally or diagonally to the framing of a house. The boards may be square-edged, shiplapped, tongued and grooved, or tongued and grooved and end-matched. Shiplap is usually used although square-edged boards, when employed with good building paper, will serve just as well and cost less than matched material which is shiplapped or tongued and grooved as it provides greater coverage per board. Recent tests by the U. S. Bureau of Standards proved that sheathing boards laid not more than one-eighth of an inch apart give the same insulation and draft prevention value to a wall as tongued and grooved sheathing laid tight when both are used with sheathing paper.

Wood sheathing may be applied to framing horizontally or diagonally. Diagonal sheathing is stronger than sheathing placed horizontally but it costs more in both material and labor. See Fig. 26. Wood sheathing should be fastened to each stud with two 8d com. nails and boards over 10" wide should have three nails per stud. The use of 10d com. nails increases the stiffness of sheathing 50% and its strength 40%.

To estimate wood sheathing: If laid horizontally, add to the area to be covered: for 6" D&M 1/5; for 8" shiplap 1/6; for 10" boards ⅛. If laid diagonally, add to the area to be covered: for 6" D&M 1/5; for 8" shiplap 1/6; for 10" boards ⅛.

Manufactured Wall Sheathing

Insulating Board Sheathing, see Board Products.
Gypsum Board Sheathing, see Section 19.
Plywood Sheathing, see Plywood.

To Estimate: Add 5% to the area to be covered for cutting waste.

Roof Boards—A sturdy, weather-tight, trouble-free roof begins with the roof deck, which is the foundation for the actual water-proof roof covering. Unless it is sound—of good construction and of proper materials—you cannot expect any roof to give long, satisfactory life.

First, be sure the lumber for your roof deck is good lumber, properly seasoned and dried.

It should be in narrow widths, not over six inches, and preferably tongue and groove. Don't permit the use of cheap lumber, or boards which are broken, split, or knotted. Sections broken out of sheathing boards often fail to properly support the shingle, and allow it to sag. Lumber which is green, or poorly seasoned, will cause buckling, cupping, and cracking of the roof covering. Defects of this kind are often hard to find and always costly to remedy.

As the roof boards are depended upon for some bracing effect as well as to furnish the foundation for the roof covering, the joints should be staggered.

All roof boards should be nailed with at least two 8d common nails at each rafter. Boards wider than six inches require at least three nails.

The kind of roof boards to be used depends on the kind of roof covering to be used.

For wood shingles the roof boards are usually 1x4 or 1x6 spaced 2" apart to allow for the circulation of air to prevent the rolling of shingles.

To Estimate: To find the amount of roof boards required, determine the area of the roof and deduct 1/5.

If asphalt, asbestos or slate shingles are used the roof boards should be 1x6 board laid solid or "tight."

To Estimate: Add 5% to the roof area to determine the amount of boards required.

If roll roofing is to be used, shiplap or 1x6 flooring should be used.

To Estimate: for footage of shiplap required, add 1/6 to area of roof. For footage of 6" flooring, add 1/5 to area of roof.

Bridging—Bridging is the lateral bracing of joist. See Fig. 24. They are short pieces of 1x3 or 2x2 material nailed at the top of one joist and at the bottom of the next joist. Two pieces, forming a cross, are nailed in place before the sub-flooring is laid. The purpose of bridging is to keep the joist in alignment and to distribute to all of the joist any exceptionally heavy, concentrated loads or sudden jolts that may be applied directly over one or two of them. Tests show that bridged joist will take three times as much weight as unbridged joist. For a joist span of from 10 feet to 14 feet one row of bridging is sufficient, but in spans over 14 feet two rows should be installed.

To Estimate: The number of lineal feet of bridging required is 2½ times the length of the run.

Grounds are strips of wood of the same thickness as lath and plaster which are attached to the walls before the plastering is done. They are used around windows, doors and other openings as a plaster stop and in other

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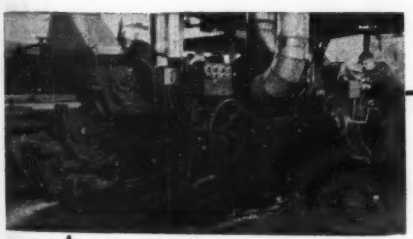

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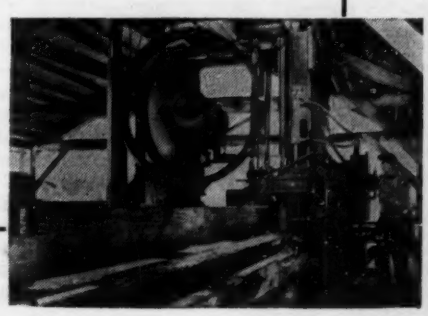
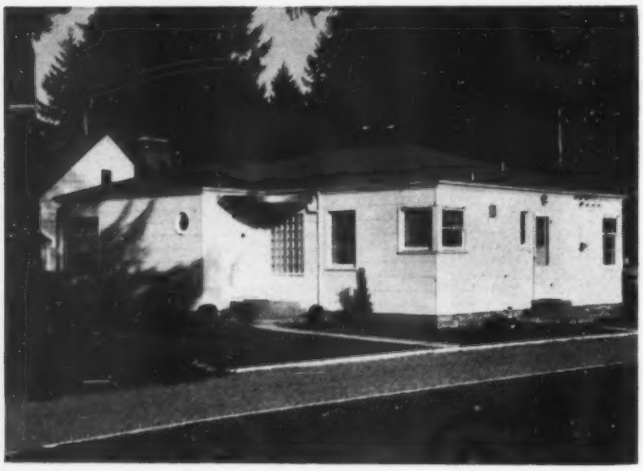
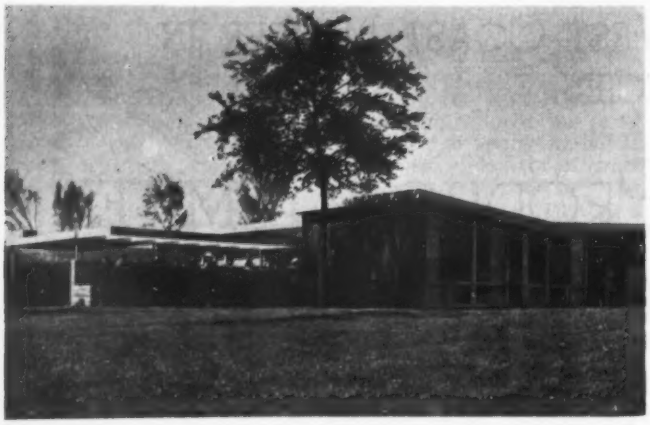


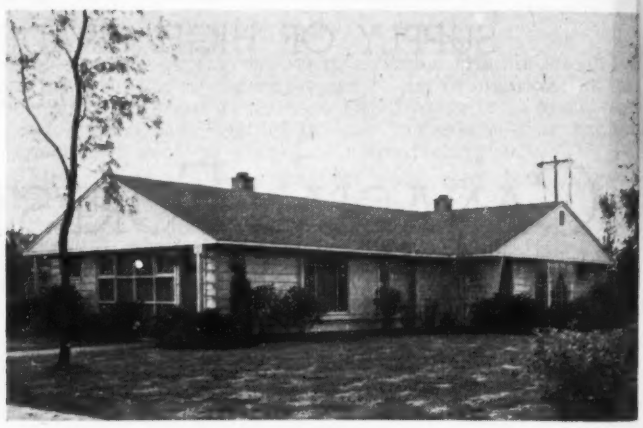


BOXED type cornice is shown above. This example has no overhang.

THIS house has no cornice. Rafter ends overhang plates with no covering.



MODERN style of design and flat roofs make the cornice a joist trim. They are usually plain.



STANDARD box cornice with rafter overhang give pleasing shadow line to house.

places for attaching baseboards or other trim. Grounds should be ⅞ inches wide and the thickness of the lath and plaster. Instead of two pieces of grounds to which to attach the base, in certain vicinities FHA requires a solid piece of 1x3.

To Estimate: Grounds should be ⅞" wide and the thickness of the plaster base and plaster coat. Estimate a single strip around all windows and door openings which receive trim and for the base. Allow 15 lin. ft. for each window and 17 lin. ft. for each side of a door opening which is to receive trim. To find the amount required for base, take the perimeter of each room, deduct from this the width of each opening plus 4 inches; total of all rooms, halls, closets, etc., is the amount required.

Furring—Strips of wood applied to a wall or other surface to even it, to provide an air space or to give it a thickened appearance, usually as a base for the application of wall covering.

To Estimate: Furring required per 100 sq. ft. of wall or ceiling area:

Spaced Lengthwise	Spaced Crosswise	
24" oc	24" oc	110 lin. ft.
24" oc	48" oc	85 lin. ft.
24" oc	96" oc	70 lin. ft.
24" oc	96" oc	120 lin. ft.

CORNICE

Cornice, in its design, is influenced by climate, exposures, local preferences, and current architectural trends. It is anything but uniform in design, girth, width, size, or number and design of its members. For example, the ranch house type house has wide overhanging eaves, while the modified colonial type house affects close eaves with minimum projection.

However, in general all cornices are made up of a frieze, bed mould, plancher (coffit), fascia, and crown mould. A simple cottage cornice or an elaborate colonial cornice are all made from these basic parts. The difference in design will come from the selection of the mouldings and material, the sizes of the plain members and the proportion of the various parts.

"Open" cornice consists of exposed rafters covered with any type of ceiling material, fascia, frieze and crown moulding.

"Closed" cornice consists of 2x4 lookouts, fascia, plancher (soffit) of one piece or made from beaded ceiling, depending on the width of the overhang. The width of the overhang determines the length of the lookouts and the plancher area.

Rake finish is used when finishing the exposed edges of a gable or shed-type roofs where overhang or projection is not desired. It consists of a fascia against the side of the building trimmed with a crown moulding. When used at the eaves, it is called a "crown and frieze" cornice.

Materials Required Per 100 Lin. Ft. of Cornices

10% added for waste
Measure cornices at eaves and not wall line

Type of Cornice	C&F	Box	Cornice	*Open	Cornice
Projection to Fascia	0"	12"	24"	12"	24"
Crown Mldg. A, lin. ft.	110	110	110	0	0
1x6 Frieze, B, bd. ft.	55	55	55	55	55
1x8 Frieze, B, bd. ft.	73	73	73	73	73
Bed Bldg., C, lin. ft.	0	110	110	110	110
1x4 Fascia, D, lin. ft.	0	37	37	0	0
4" Clg. Plancher, E, bd. ft.	0	135	270	160	320
Shingle Mldg., F, lin. ft.	0	0	0	110	110
Paint Surface, sq. ft.	100	200	300	270	440

*Plancher for open cornice based on ⅓ pitch roof. Deduction can be made for roof sheathing it usually replaces.

Compute price per 100 lin. ft. and point off two places for price per lin. ft. as given in quantity of units.

Note: 1¼" frieze or fascia requires ¼ more than 1". Nails provided by other construction units.

Section 2 PLYWOOD

PLYWOOD IS an engineered wood board or panel consisting of an odd number of veneer sheets placed crosswise and bonded together under high pressure, with either waterproof or water-resisting adhesives, each stronger than the wood itself.

Plywoods have found numerous applications in the construction field, and are consequently a major item of merchandise for the building product dealer. It is important, therefore, that he be familiar with the various types and grades as well as their many uses and applications.

KINDS OF PLYWOOD

Plywoods are manufactured from many species of wood, falling into two main classifications; softwood and hardwood. The former type, of which Douglas fir is perhaps the most widely used, has its most common usage as a construction material; while the latter is most commonly used as a finishing material, and for furniture.

Hardwood plywoods are identified by their face, and are not necessarily hardwood throughout. It is worthy of mention also that with the development of amazing new adhesives in recent years, plastic, metal, ceramic, and many other similar faces are bonded to plywood; and their uses embrace many other industries as well as the construction field.

HOW PLYWOOD IS MADE

In the manufacture of cold-pressed, moisture-resistant plywood, peeler logs about 4 feet in diameter are first cut into desired lengths or bolts, usually about 8 feet long.

The bolt is placed in a giant lathe which peels a continuous thin sheet known as veneer. The veneer is then clipped to desired widths after which it is run through dryers until the moisture content is about 2 or 3 percent.

After careful grading, the veneer goes to the glue spreaders where it is assembled into panel form in stacks about 5 feet high. A hydraulic press then applies approximately 150 lbs. of pressure per square inch. The stack is clamped to maintain pressure for a number of hours until the glue is set.

Later the newly glued panels are cut and trimmed to exact size, and run through sanding machines from which they emerge as finished plywood.

Exterior or waterproof plywood is made by the hot-press process, using phenolic resin adhesives that are pressed and completely set within a few minutes by means of large hot-plate presses. These open up vertically like giant accordions, with a number of parallel, thick steel plates which are heated by steam. They provide the pressure and heat needed to change the phenolic resin adhesive into an insoluble plastic, and welding the cross-laminated veneers into large, rigid panel units, suitable for permanent weather exposure.

Softwood Plywood

GRADES & SPECIFICATIONS:—

Douglas fir plywood is made in two types, Interior (Int.) and Exterior (Ext.), with the type referring to the moisture resistance of adhesives bonding the plies together. Within each type there are several grades, which are established by the quality of the veneer on both sides of the panel as hereinafter defined. The grade descriptions set forth the minimum requirements, and therefore, the majority of panels in any shipment will exceed the specification given.

Veneers.—Veneers shall be 1/12 inch or more in thickness before sanding in panels ¼ inch and thicker.

All veneers used in the different plywood grades shall be one of the following, except in center veneer of Interior Type panels with five or more plies:

Grade A (Sound) shall be of one or more pieces of firm, smoothly-cut veneer. When of more than one piece, it shall be well joined and reasonably matched for grain and color at the joints. It shall be free from knots, splits, pitch pockets, and other open defects. Streaks, discolorations, sapwood, shims, and neatly made patches shall be admitted. This grade shall present a smooth surface suitable for painting.

Grade B (Solid) shall present a solid surface, free from open defects but in addition to characteristics admitted in Grade A (Sound), veneer shall admit also neatly made circular plugs, as well as synthetic plugs that present solid, level, hard surfaces, knots up to 1 inch if both sound and tight, tight splits, slightly rough but not torn grain, and other minor sanding and patching defects. The grade shall be paintable.

Grade C (Exterior Back) may contain knotholes not

Table 1.—Types and Grades of Douglas Fir Plywood

*All grades are sanded both sides except EXT-DFPA Sheathing and Interior Plyscord, which are unsanded. 3/8" and thinner panels have a minimum of three plys: 1/2" to 3/4" incl. are 5-ply minimum; 7/8" and thicker are 7-ply minimum.

About three-fourths of all fir plywood is of panels 4'x8'; all sizes shown are standard, but volume of panels of other dimensions is small compared with quantity of 4'x8' plywood.

GRADES OF EXTERIOR-TYPE*					
Grade - Trademarks ®	Face	Back	Widths (Feet)	Lengths (Feet)	Thicknesses (Inches)
EXT-DFPA • A-A	A	A	2½, 3, 3½, 4	5, 6, 7, 8, 9, 10, 12	3/16, ¼, 3/8, ½, 5/8, ¾, 7/8, 1, 1⅛
EXT-DFPA • A-B	A	B	2½, 3, 3½, 4	5, 6, 7, 8, 9, 10, 12	3/16, ¼, 3/8, ½, 5/8, ¾, 7/8, 1, 1⅛
EXT-DFPA • PLYSHIELD	A	C	2½, 3, 3½, 4	5, 6, 7, 8, 9, 10, 12	3/16, ¼, 3/8, ½, 5/8, ¾, 7/8, 1, 1⅛
EXT-DFPA • UTILITY	B	C	2½, 3, 3½, 4	5, 6, 7, 8, 9, 10, 12	3/16, ¾, 3/8, ½, 5/8, ¾, 7/8, 1, 1⅛
EXT-DFPA • SHEATHING	C	C	4	8, 9, 10, 12	5/16, 3/8, ½, 5/8
EXT-DFPA • CONCRETE FORM	B	B	4	8	5/8, ¾

GRADES OF INTERIOR-TYPE*					
Grade - Trademarks ®	Face	Back	Widths (Feet)	Lengths (Feet)	Thicknesses (Inches)
INTERIOR • A-A	A	A	2½, 3, 3½, 4	5, 6, 7, 8, 9, 10, 12	3/16, ¼, 3/8, ½, 5/8, ¾
INTERIOR • A-B	A	B	2½, 3, 3½, 4	5, 6, 7, 8, 9, 10, 12	3/16, ¼, 3/8, ½, 5/8, ¾
PLYPANEL	A	D	2½, 3, 3½, 4	5, 6, 7, 8, 9, 10, 12	3/16, ¼, 3/8, ½, 5/8, ¾
PLYBASE	B	D	2½, 3, 3½, 4	5, 6, 7, 8, 9, 10, 12	3/16, ¼, 3/8, ½, 5/8, ¾
PLYSCORD	C	D	4	8, 9, 10, 12	5/16, 3/8, ½, 5/8
PLYFORM	B	B	4	8	¼, ½, 9/16, 5/8, ¾

VENEERS USED IN DOUGLAS FIR PLYWOOD

A—Highest standard appearance quality veneer. Panels with an A face are smooth and paintable; also, with selection of panels for pattern and appearance before installation, panels with an A face are suitable for modern light stain-glaze finishes. Veneer may be of more than one piece, well joined and reasonably matched; neatly made repair patches are permitted as are shims, streaks and sapwood. No open defects permitted.

B—Smooth and paintable. Similar to A veneer but also permits circular plugs, edges of which may be slightly rough. Also permitted are knots up to 1" if sound and tight, tight splits and slightly rough grain.

C—Principally used for inner plys and backs (some grades) of Exterior type. Permits knotholes up to 1", small borer holes, splits 3/16" or less, tight knots up to 1½", various repair patches.

D—Used only for Interior type panels. Permits knotholes up to 2½", pitchpockets, limited splits, various repair patches. (In Plyform, all inner plys are C veneer.)

larger than 1 inch in least dimension, open pitch pockets not wider than 1 inch, splits not wider than 3/16 inch which taper to a point, worm or borer holes not more than 5/8 inch wide or 1¼ inches long, knots if tight and not more than 1½ inches in least dimension, and plugs, patches, shims, sanding defects, and other characteristics in number and size that will not impair the serviceability of the panel.

Grade D (Utility Back) (May be used only in Interior Type panels) shall contain no knotholes greater than 2½ inches in maximum dimension, no pitch pockets more than 2 inches wide by 4 inches long or equivalent area if of lesser width, no splits wider than ½ inch; splits ½ inch wide at widest point may be one-fourth panel length; those not more than ¼ inch wide at widest point may be half-panel length; and those not more than 3/16 inch wide may be full-panel length, but all splits shall taper to a point at one end. Any number of plugs, patches, shims, worm or borer holes, sanding defects, and other characteristics are permitted provided they do not seriously impair the strength or serviceability of the panel.

TYPES

Interior Type

This type consists of plywood with a high degree of moisture resistance where its application requires that it shall retain its original form and practically all its strength when occasionally subjected to a thorough wetting and subsequent normal drying, a plywood suitable for construction where subjected to occasional deposits of moisture by condensation through walls or leakage or from other sources. Western hemlock, Sitka spruce, noble fir, commercial white fir, Alaska cedar, Port Orford cedar, California redwood, ponderosa pine, sugar pine, Idaho white pine, and Western larch, may be used for inner plies only, in Interior Type grades A-A (Sound 2 Sides), A-B (Sound/Solid), A-D (Sound 1 Side), B-D (Solid/1 Side), and A-A (Door Panels). Plywood of this type is available in the grades given in Table 1.

Exterior Type

This type represents the ultimate in moisture resistance, a plywood that will retain its original form and strength when repeatedly wet and dried and otherwise subjected to the elements, and suitable for permanent exterior use. It shall be free from both core gaps and core voids that impair the strength or serviceability of the panel. If a tape is used in the glue line it shall be resin-impregnated. All veneer used in Exterior Type panels shall be of Douglas fir and of C (Exterior-back) grade or better. All Exterior panels shall be so designated by a distinctive symbol "Ext" branded or stamped on edge of each panel. Plywood of this type is available in the grades given in Table 1.

USES AND APPLICATION

Porch Ceilings and Soffits

For Siding. Only exterior type panels should be specified for any exposed surface. For siding in conventional construction (i.e., over sheathing) a minimum of 3/8 inch is recommended. In single wall construction ½ inch or thicker generally is desirable. Usually sound one side (So1S) grade is used as only one side of the panel is exposed.

Application. Nail to studs with 6d (8d for 5/8 inch) for 3/8 or 7/16 inch, and 8d for thicker. Full size (4x8) should be fastened not more than 6 inches on centers at panel edges and 12 inches elsewhere. When used as lapped siding, nailing at panel ends should be no more than 4 inches o.c. Panels may be applied either horizontally or vertically. The best paint job for regular wood siding is best for exterior plywood. All edges of

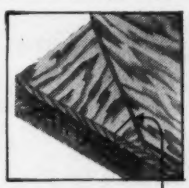
Harbor's Dependable Products — Extra Quality Materials That Offer These 3 Big Advantages

THE QUALITY of Harbor products goes far beyond accepted standards. Result: 1—greater repeat business for dealers who feature Harbor products; 2—better jobs for the dealer who features Harbor products; 3—better value for the ultimate consumer. Check with any Harbor dealer or user. You'll find they agree: Harbor *does* turn out extra-quality materials, *made* better to *serve* better.

SUPER-Harbord

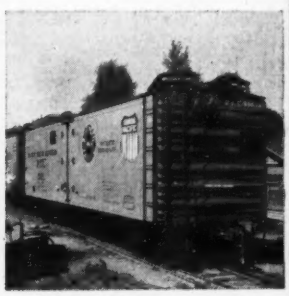
THE ORIGINAL EXTERIOR-TYPE DOUGLAS FIR PLYWOOD

FOR YEARS the preferred panel for all outdoor and marine uses, SUPER-Harbord exceeds Commercial Standard specifications in four important respects: 1. Heartwood only is used throughout; 2. Core veneers are precision jointed to minimize voids; 3. Inner plys are B grade, with defects repaired to produce a "solid" panel face to back; 4. After hot-pressing, panels are tempered to restore proper moisture content. The result is a uniform, extra-strong Exterior panel of double dependability—the accepted standard for superior performance.



Precision-jointed cross banding

Super-Harbord, the original Exterior-type plywood, is better for marine uses



Harborite, the original abrasion-resistant, plastic-faced plywood panel

SUPER-Harbord PLYCRETE

Recognized for more than a decade as the finest fir panel for multiple re-use concrete form work demanding relatively high architectural finish. Superior core gives it stamina to withstand rugged service.

SUPER-Harbord GIANT PANELS

Produced to order by joining standard SUPER-Harbord panels with a 1 to 12 ratio scarf joint. Any length, with a maximum width of 9′ unsanded (8′6″ sanded). Any width, with a maximum length of 9′ unsanded (8′6″ sanded).

Harwood

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Dependable quality western woods—the nation's familiar building material—are sold under the name of Harwood. Manufactured at Riddle, Oregon, from our adjacent timber, Harwood fir, pine and hemlock lumber reaches the dealer, specifier and user after careful selection for quality and grade.

Harwood lumber, tough and strong for dependability

Harborite

PLASTIC-FACED PLYWOOD

Durable, rugged SUPER-Harbord Exterior-type panels—with tough, hard, smooth faces of resin-impregnated plastic fiber permanently fused to the plywood core: that's Harborite. It brings you all the strength and structural values of exterior plywood, plus the appearance value, check-free qualities and extra durability of a superior plastic overlay. Harborite is a construction, industrial and utility panel for siding, soffits, cabinet work, signs, toys . . . for siding and lining railroad cars, trucks, trailers, etc.

HARBORITE GIANT PANELS

Giant panels of Harborite plastic-faced plywood are manufactured to order for special jobs requiring the advantages of an "extra-size" overlay panel. Harbor's 1 to 12 scarf ratio produces a superior joint. Standard overlay weight is 65/65. Additional plastic facing on order.

Harbord

INTERIOR-TYPE PLYWOOD

A quality moisture-resistant panel in all standard industry appearance grades—for interior real wood paneling, cabinets, sheathing, subflooring, built-ins, indoor furniture, displays and interior industrial applications.

Harbord

PLYCRETE

The original concrete form panel—preferred for 20 years on concrete form jobs where limited re-use will write off the cost. Harbord Plycrete is edge-sealed and oiled at the factory for user convenience. Both faces smoothly sanded.

Harbor Plywood Corporation

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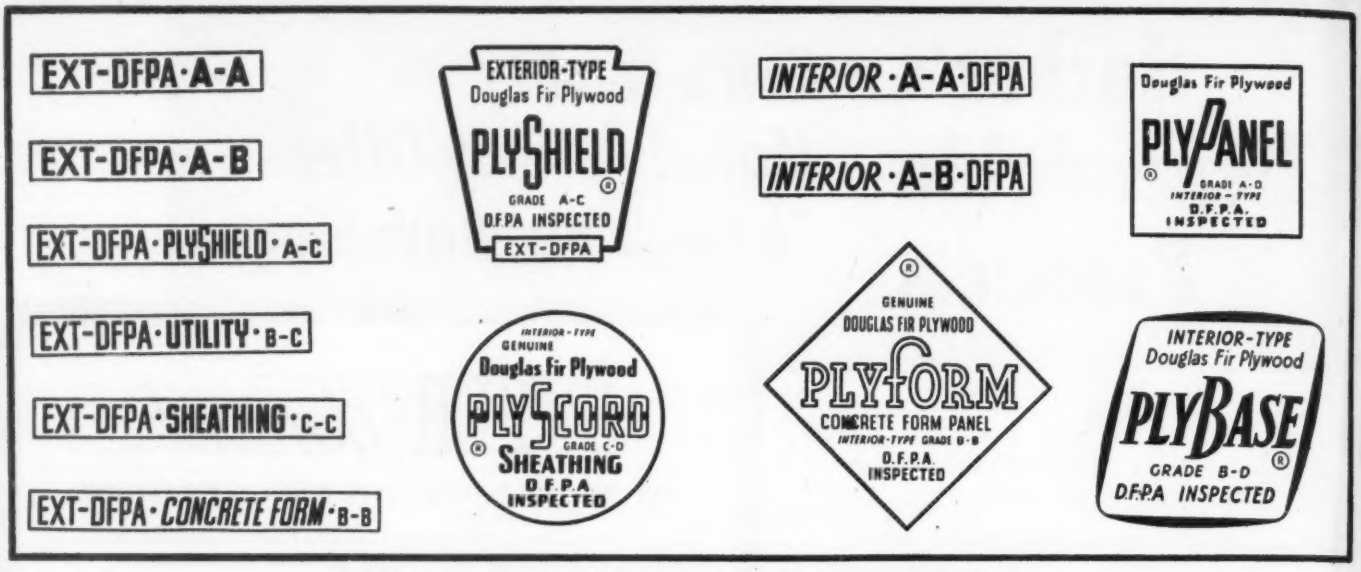


GRADE AND TYPE SYMBOLS—DOUGLAS FIR PLYWOOD

the plywood should be bedded in thick lead and oil paste as installed.

Wall Sheathing. Plyscord grade. Minimum thickness $\frac{7}{16}$ inch. However, thicker Plyscord is often specified.

Application. Mail to studs with 6d (8d for $\frac{5}{8}$ inch) common nails spaced 6 inches o.c. at edges and 12 inches o.c. for all other bearings. Apply horizontally for greater stiffness. Building paper unnecessary. All vertical joints should have solid backing.

Roof Sheathing. Plyscord grade. Thickness determined by roof load and rafter spacing. See table.

Application. Apply lengthwise across rafters. Nail $\frac{7}{16}$ and $\frac{5}{8}$ inch to rafters with 6d common (8d for $\frac{1}{2}$ and $\frac{5}{8}$ inch) spaced 6 inches at the edges and 12 inches elsewhere. Panel ends should join at center line of rafter in order to obtain proper nailing.

Sub-Flooring. Plyscord grade—$\frac{7}{16}$ or $\frac{5}{8}$ inch may be used with joist 16 inches o.c. when $\frac{3}{4}$ inch finish flooring is used; but $\frac{1}{2}$ and $\frac{5}{8}$ inch are more popular. Use 6d common nails for the $\frac{7}{16}$ and $\frac{5}{8}$ inch (8d common for $\frac{1}{2}$ and $\frac{5}{8}$ inch) spaced not over 6 inches o.c. at edges and 12 inches elsewhere.

Application. Panels should be applied lengthwise across joist with ends bearing on joist. Support panel edges with headers cut in between joist.

Interior Walls and Ceilings. Plypanel grade, sound 1 side, $\frac{3}{8}$ inch preferred, but $\frac{1}{4}$ inch generally used.

Application. Apply panels either vertically or horizontally. For $\frac{3}{8}$ inch panels over studs 16 inches o.c. use 6d finish or casing nails spaced 6 inches o.c. For $\frac{1}{4}$ inch panels install with 4d finish nails. Panel joints may be butted and covered with mouldings, inset mouldings used, veed or lapped. Light stain finish may be used to decorate. For wallpaper or highest enamel finish, prime or seal and fill joints and nail holes. Apply painter's canvas as base for enamel; apply smooth wall liner for a wallpaper base.

Concrete Forms. For multiple reuse use $\frac{3}{4}$ or $\frac{5}{8}$ inch Plyform grade.

For single use basement forms with panels re-used for sub-flooring or sheathing, use $\frac{5}{8}$ inch Plyscord.

Cabinets and Built-Ins. Plypanel So2S where both sides are exposed and So1S where only one surface is exposed. $\frac{3}{4}$ inch for doors, counter tops and shelves.

FINISHING DATA

Exterior Walls—Field studies, exposure fence studies and weatherometer studies indicate that the best paint job for regular wood siding is also the best for Exterior type Douglas fir plywood. Three coats of high quality exterior paint are suggested. These paints contain high percentages of white lead and oil and give good service on plywood. They permit minute expansion and contraction without breaking the paint film. (Paints which set to a hard, brittle film are to be avoided.) Good performance on plywood has been given by high grade exterior paints which were primed with a high percentage of linseed oil. The value of oil in reducing checking has been borne out in extensive research studies and commercial applications. Aluminum primer, compounded with the best grade of long oil phenolic varnish vehicle, is an excellent primer for plywood. Two coat paints are available which perform satisfactorily when properly applied although experience data on such procedure is meager. Textured finishes, using high grade resin-base paints with asbestos and silica, have also proved popular.

As described above in paragraph on "Joints," all edges of plywood should be sealed with lead and oil paste. In unusually damp localities the panels should also be back primed.

Interior Walls—Simple, yet attractive light stain finishes for interior walls of Plypanel have been developed. The procedure is to subdue the grain contrast, yet preserve the natural beauty of the wood. Follow these basic steps: 1. A coat of interior white undercoater, liberally thinned with pure turpentine and linseed oil. When dry, sand lightly with No. 000 sandpaper. 2. One coat of white shellac, steel-wooled when dry with No. 1 wool. 3. One coat of the desired color in blending oils, applied thinly and wiped or dry-brushed to the proper color tone. 4. One coat of flat varnish. For best effect the varnish coat should be steel-wooled.

A limitless variety of effects can be secured by changing the color coat. Desirable tints and shades may be obtained by blending flat enamels according to proportions suggested by decorators and painters. Prepared paints may also be used effectively.

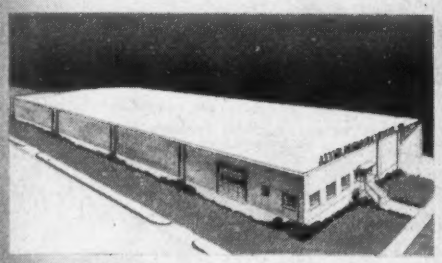
Economical Finishes—An inexpensive but pleasant finish can be obtained with a single coat of interior white undercoater pigmented to the desired tint and thinned sufficiently so the wood grain pattern shows through. A second coat of clear shellac or varnish will add to the durability.

An economical one-coat stain finish which gives attractive results is marketed by a number of manufacturers and can be obtained in various pastel shades. Note: Basic procedure for staining plywood includes application of a clear resin sealer, followed by successive coats of stain, shellac and varnish.

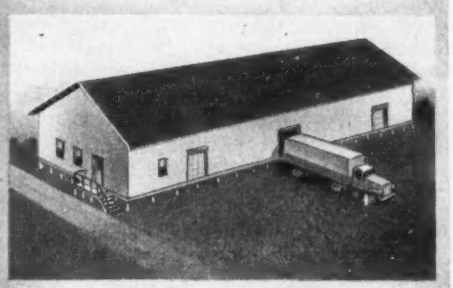
Wallpaper—Panels should be closely butted, primed with a thin flat white paint, and joints filled with Swedish putty. Coat surface with a wheat flour paste to which has been added a gelatin glue size. Over the plywood, apply a layer of $\frac{3}{4}$ lb. wall liner treated with same paste and size. The wall liner, or building felt, should be butted neatly and rolled smooth. Then, the wallpaper is hung in accordance with standard practice.

Enameled Walls—The very best possible results may be obtained by first covering the smooth Plypanel with painter's canvas or an inexpensive unbleached muslin. Follow these steps: Fill nail holes or hammer marks and joints with Swedish putty, using plasterer's trowel. Prime wood with thin flat white oil paint. Hang muslin as wallpaper with regular wallpaper paste that has previously been strained to remove lumps. When dry, apply coat of glue size. Over this any conventional finish can be applied with remarkably beautiful results.

GRAND RAPIDS, MICHIGAN



INDIANAPOLIS, INDIANA



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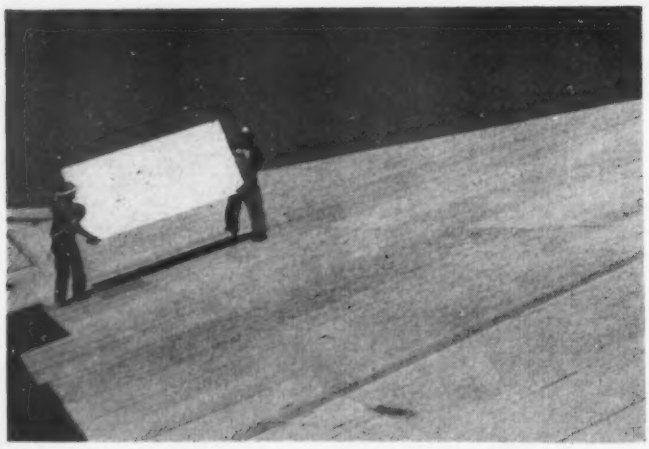


PLYWOOD as a sheathing and roof decking material is light, strong, and easy to handle. It provides a good base for all types of finishing materials.

Plastic Paints—For plastic and water paints, the surface should be sealed to prevent grain raise. Paint coats then should be applied in accordance with the manufacturer's directions.

Stippled Surfaces—Textured surfaces over plywood may be obtained by using a resin sealer or a coat of shellac after which a thinned prime coat is applied. The final heavy coat is put on without thinning and without brushing out. A stipple brush or a large flat sponge is used to develop the stippled effect.

APPROXIMATE WEIGHTS VARIOUS THICKNESSES OF DOUGLAS FIR PLYWOOD

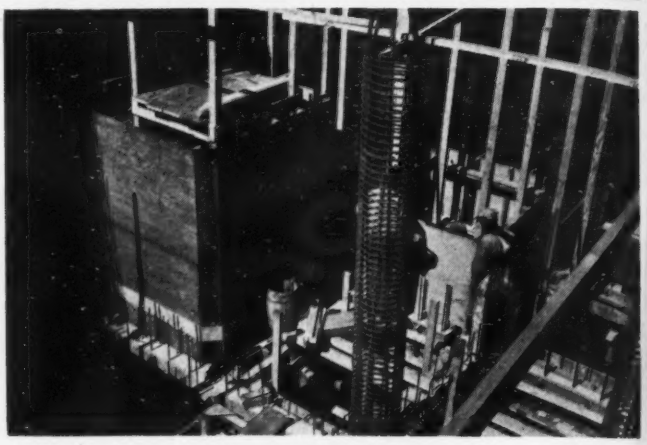
Thickness	Per 1,000 Feet	Thickness	Per 1,000 Feet
1/8 in.	490 lbs.	5/8 in.	1,675 lbs.
3/16 in.	640 lbs.	11/16 in.	1,825 lbs.
1/4 in.	790 lbs.	3/4 in.	2,000 lbs.
5/16 in.	950 lbs.	13/16 in.	2,225 lbs.
3/8 in.	1,125 lbs.	7/8 in.	2,375 lbs.
7/16 in.	1,300 lbs.	1 in.	2,600 lbs.
1/2 in.	1,525 lbs.	1 1/8 in.	3,350 lbs.

Plywood has without exaggeration been termed "the wood of 1000 uses." In the construction industry it has found tremendous acceptance as sheathing, sub-flooring, roof decking, interior wall finishing, cabinets and built-in furniture, and many other uses. Its applications are equally widespread in farm buildings and equipment.

The special waterproof grades are excellent for the fabrication of concrete forms, and for many other uses where water resistance is essential.

For the home hobbyist, plywood is a natural material with which to work, being easy to work and finish, and with the necessary strength and durability for almost any job required of it.

EXTERIOR GRADES of plywood has found widespread use in small boats. It provides a strong, light craft, impervious to moisture.



AMONG ITS important uses, plywood is an excellent product for concrete forms. The cast concrete surface is smooth and even, the forms can be used repeatedly.

Hardwood Plywood

The fabrication of hardwood plywood is not a new art. It has been practiced through a hundred generations by the master craftsmen of civilization. However, as with all other medieval crafts, modern engineering and scientific achievements have so improved the technique of plywood manufacture that never before has this product reached such high standards of quality and utility.

Hardwood plywood is similar in construction to the softwood varieties discussed earlier in this section. It consists of a center ply known as the core, and intervening plys laid at right angles, known as crossbands. The faces are thin layers of veneer, oftentimes of the finest types of wood grown in the world.

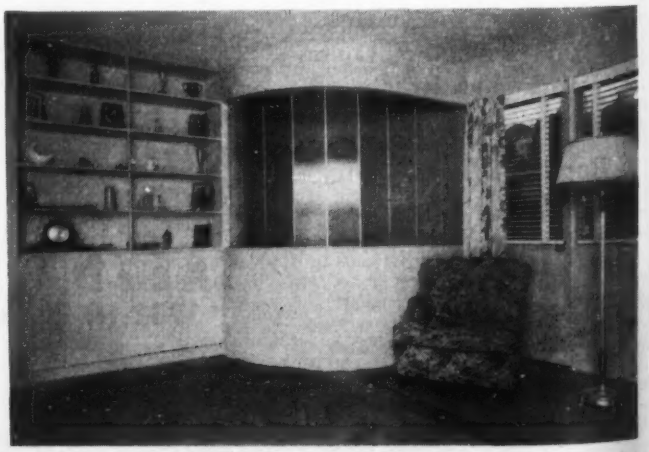
Hardwood plywood is not only decorative, but is relied on to give strength to the structure or object of which it is a component part. It has great resistance to splitting and has a very satisfactory nail-holding ability.

TYPES OF HARDWOOD PLYWOOD

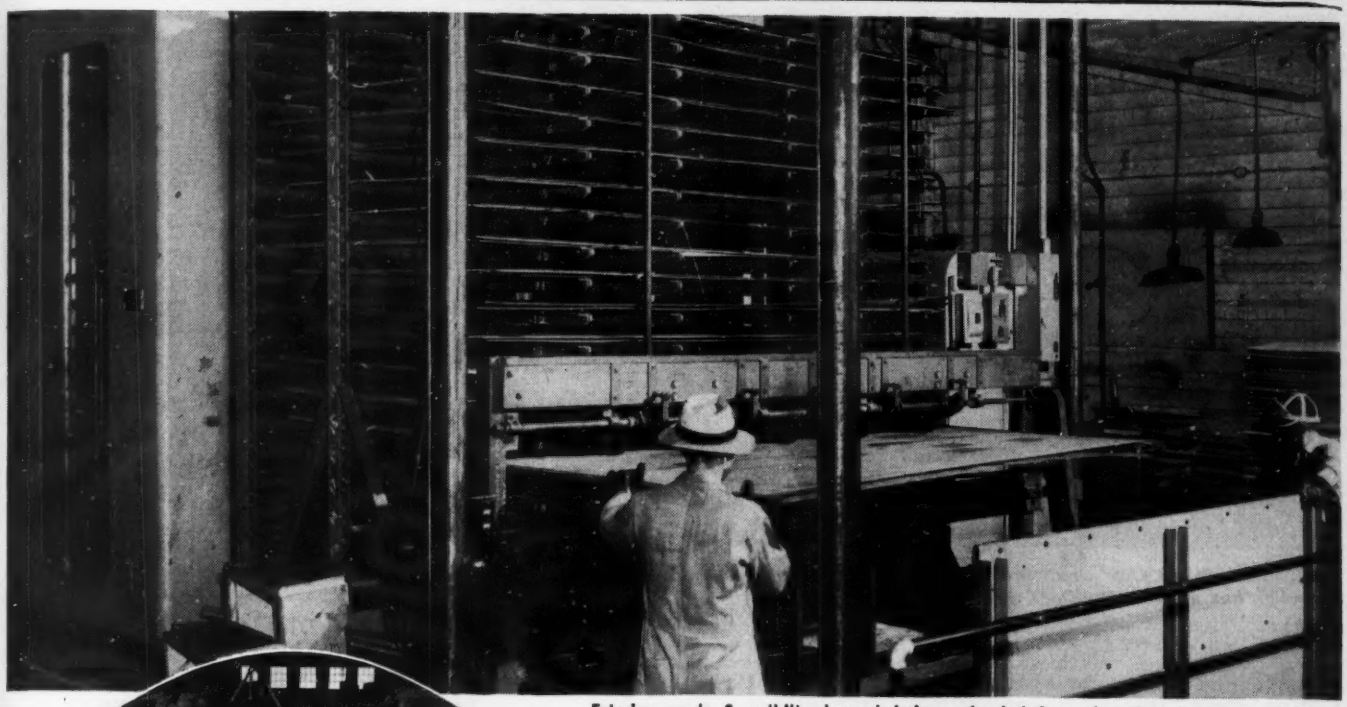
By species, the types of hardwood plywood available include walnut, mahogany, gum, oak, birch, maple, poplar, tupelo, basswood, cottonwood, sycamore, elm, ash, aspen, beech, alder, cherry, butternut, locust, buckeye, holly, pecan, hickory, chestnut, magnolia, prima vera, satinwood, zebrawood and numerous other domestic and foreign species.

The appearance of veneer produced from any particular wood will vary considerably, according to the method of cutting it from a log. A rotary cut veneer will have a much different grain figure than one sliced or sawed.

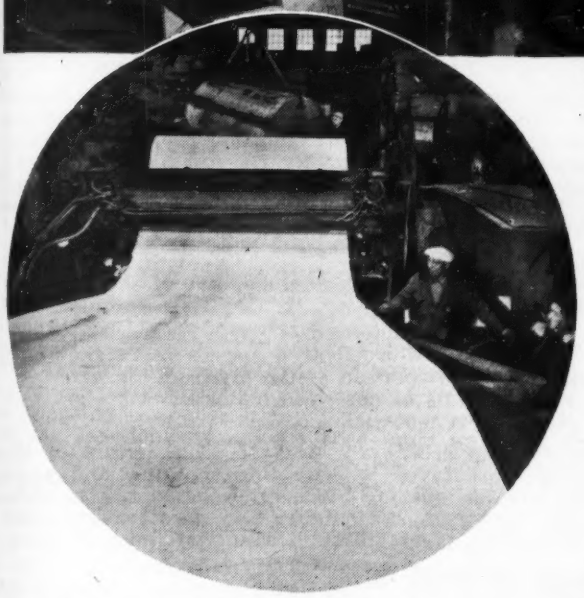
Inasmuch as logs are never perfectly round, and the annual rings are not true circles, the knife on a rotary lathe cuts in and out, or across the annual rings at many points. The narrower the annual rings are, therefore, the more mild is the grain pattern; while wide-ringed logs usually produce the wild figured pattern.



PLYWOOD IS a popular interior wall finishing material. In this room it accomplishes an unusual curved effect.



Exterior grade Soundbilt plywood being unloaded from the giant hot press.



From lathe to shipping dock, Soundbilt quality is built into Soundbilt plywood.

Soundbilt

Exterior and Interior

DOUGLAS FIR PLYWOOD

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Carefully manufactured according to DFPA standards of quality, Soundbilt exterior and interior grade plywood is made with precision with customer satisfaction in mind. You can rely on Puget Sound Plywood to give you the best from this great Douglas Fir region. So, on your next plywood order specify Soundbilt and you'll specify satisfaction.

PUGET SOUND PLYWOOD, INC.

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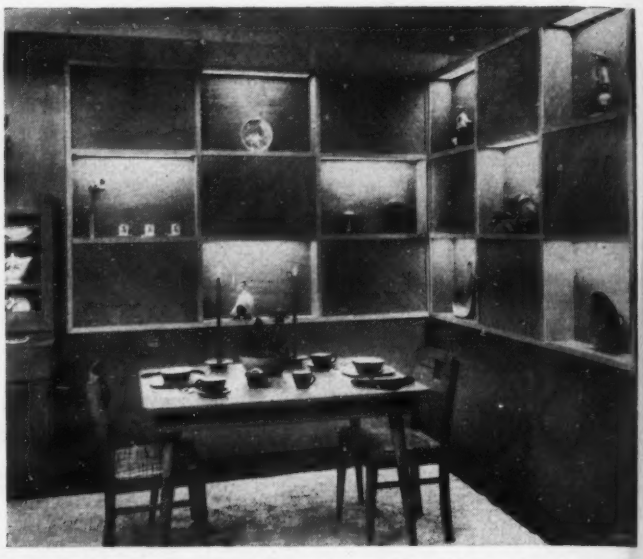
HARDWOOD PLYWOODS with rare and exotic wood faces give distinction and elegance to homes, offices, stores, and buildings.



THIS UNUSUAL decorative effect has been achieved by combining smooth and etched faced plywoods in the construction of wall shadow boxes.

Also, since ring width varies throughout a log, the pattern may vary as the veneer develops, with the more figured grains coming from the center.

Some hardwoods yield a more desirable figure when cut on a lathe than by any other method. Masur Birch and Bird's Eye Maple are examples.

In slicing or sawing, on the other hand, the first slice is almost identical with the second, and so on through a log. Plywood faces made up from these flitches, or series of thin slices, may be matched to form pleasing and symmetrical grain patterns.

SALES OPPORTUNITIES

Today, the dealer has two immediate sales opportunities for hardwood plywood; first for its many uses in construction as a decorative wall finishing material; and second, to supply the rapidly growing requirements of hobbyists and amateur craftsmen. The latter usually want to buy small quantities, but their demand is constant, and they pay cash for their purchases.

The dealer who becomes thoroughly familiar with the available types of hardwood plywoods, how to work and finish them, how they may be used to fashion a wide range of home accessories, and conveys this information to his customers, will create a large and steady volume of business; for working with hardwood plywoods has a fascination that few hobbyists can resist.

SPECIAL FACINGS AND OVERLAYS

Facings and overlays for plywood are of very recent origin. Such specialized plywood is just now beginning to find its way into the merchandising programs of more aggressive lumber dealers. By the use of facings and overlays, the plywood manufacturer has overcome some of the limiting characteristics of conventional plywood thereby offer the dealer an opportunity to sell plywood for many new uses.

Facings and overlays in use today are of the following types:

1. Paper material impregnated with resin.
2. Face veneer of wood of a species other than that used for the major portion of the plywood.
3. Plastic sheets of non-wood material.
4. Metal sheet material.

The above overlays are used to gain certain of the following: resistance to hair line checking and grain raising, greater wearing qualities by resistance to abrasion, fire resistance, washability and resistance to stain, and decorative effects through a special finish or color.

Plywoods Which Are Manufactured in Stock Sizes

NAME	TEXTURE	COLOR	FIGURE	REMARKS
Ailon	hard	white	mild	Extremely smooth surface.
Basswood	soft	white	unfigured	
Birch	hard	white or red	mild figure	
Cedar	soft	bright red	highly figured	aromatic
Chestnut	soft	brown	highly figured	
Duali	hard	light tan	medium figure	Excellent; inexpensive.
Fir	medium	yellow	wild figure	Inexpensive
Gum (Plain)	medium hard	reddish brown to white	mild figure	
Gum (Figured)	medium hard	reddish brown	very highly figured	Cabinet wood.
(Orientalwood)	hard	light brown	highly figured; stripe or cross-fire	
Mahogany (African)	hard	red	(carried in) stripe, broken stripe, plain and cross-fire	
Maple	hard	white	(carried in) birdseye, curly, unselected and plain white	
Oak	hard	tan	(carried in) quartered large flake or mild figure, plain sawn and rotary cut	
Ponderosa Pine	soft	yellow—white		Excellent painting surface; easily worked—inexpensive.
Pine (Knotty Idaho)	soft	white	carrying small well distributed sound knots	
Poplar (Whitewood)	soft	yellow	unfigured	
Prima-Vera (White Mahogany)	medium hard		stripe figure	
Walnut (American black)	hard	light to dark brown	(carried in) stripe-heart, stripe and cross-fire figures	
Walnut (Circassion)	hard	light brown and black	highly figured	

Ash, cherry, elm, magnolia, butternut, satinwood, are other hardwood stocks usually available in standard panels.

Section 3 Metal Building Products

TYPES OF METAL BUILDING PRODUCTS

Metal building products fall generally into three broad classifications: structural, functional, and decorative or ornamental. In the first group are those items that are incorporated as a structural part of the house or building, girders, lally columns, metal framing or siding members, sash, flashing, etc.

In the functional group are such units as metal fireplaces; coal, dust, or clothes chutes; mail boxes (built-in), and many other assemblies that may be added to a structure for a specific functional purpose.

In the classification of decorative or ornamental materials are mouldings and trim, ornamental iron work of all kinds, fireplace equipment, etc. A major number of these items also serves a functional as well as decorative purpose.

It is rather difficult to draw a decisive line of definition between what constitutes metal products of a structural and functional nature and certain items that are generally considered as hardware. Since there is such a close integration of such products, some may be more completely covered in Section 5 of this book, devoted to Hardware.

Access Doors—Save the need of tearing out plaster to reach hidden plumbing, wiring, or steam pipes. Absolutely flush with wall, they may be caulked and painted or papered.

Unit consists of frame and door. Frame outer edge perforated for plaster key and easy nailing. Door held in place by two lugs at bottom and interior button catch at top. Catch operated by inserting screwdriver and turning. Door of furniture type steel will hold its shape. Finished in gray priming coat. Made in 3 sizes with door opening 8x12, 12x16 and 16x24 in.

Adjustable Cellar Posts—Designed to raise sagging floors to proper level, and provide a permamently safe support.

Size No. 1 adjustable 5'7" to 8'4"
Size No. 2 adjustable 3'8" to 5'7"
Size No. 3 adjustable 18" to 37"

Angle Irons (Lintels)—Supplied in 36", 42", 48", 54", 60", and 7E2" lengths. For window and door lintels dimensions vary with length and load. In average fireplace opening a 3¼" x 3½" x ¼" angle iron is usually specified. For brick veneer walls openings up to 3' require 3½" x 3½" x ¼"; 3' to 7' use 3½" x 3½" x ⅜"; 7' to 8' use 3½" x 3½" x ½"; 8' to 10' use 5" x 3½" x ½".

To estimate: List size, thickness and length as listed on plans or to width of masonry opening allow 4" for each bearing.

Area Walls: In low set homes with basement windows below grade, steel area walls provide an enclosure that saves time, labor and money. They are generally made of heavy gauge steel, strengthened with ribs or corrugations, and protected with a galvanized finish.

Installation is comparatively simple. Place the steel area wall in the excavation and back-fill with earth (cinders are not recommended). Earth pressure holds the wall in place. The area wall may be fastened to the foundation by nailing or bolting.

Ash Dumps—Trap doors placed in the hearth for convenient disposal of ashes. Doors, made in both single and double leaf type, are locked in frame. Tight fitting when closed prevents ash dust from reentering room.

Single leaf dumps are pivoted off-center, and are opened and closed with a poker. Angle frame is welded at corner and has deep flange that anchors firmly in the masonry.

Made of both steel and cast iron, common sizes are 8x5 inches and 1¼x7¼ inches.

Ashpit—Popular sizes of clean outs, all large enough for pits to be cleaned with a shovel, are 8x8", 12x8", 12x12", 18x24", and 24x30".

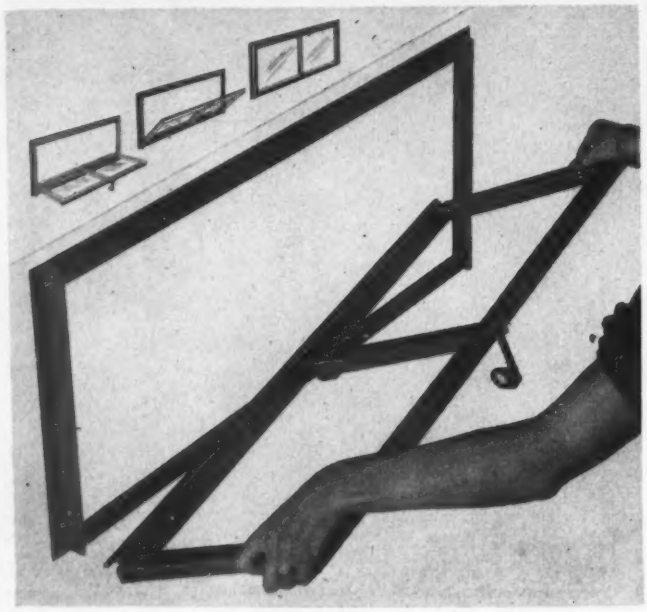
Ashpit and Flue Clean Out Doors—Installed in bottom of chimney or stack for easy removal of ashes and soot. Each flue of chimney should have a clean out door 8 x 8—for 8" flues, 8 x 12—for 12" flues.

Basement Entrance Door Assemblies — These units are supplied complete, and may be installed in either masonry or frame houses or other structures. Made of steel, or combinations of steel and aluminum, these cellar doors provide long, durable service in structures where such assemblies are specified.

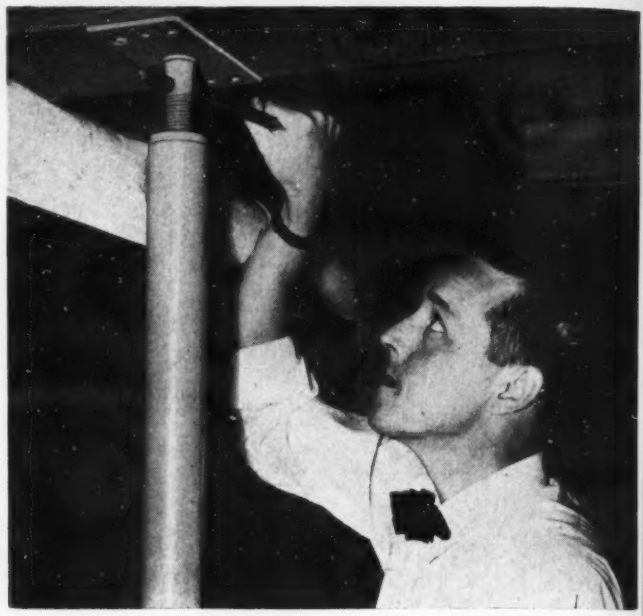
The assemblies are supplied in four basic styles and three stock sizes. See Table below.

DIMENSIONS, WEIGHTS

	Size A	Size B	Size C
Overall Width	3'—11 "	4'— 3"	4'—7 "
Height	2'— 0½"	1'—10"	1'—7½"
Overall Length	4'—10 "	5'— 4"	6'—0 "
Shipping Weight, Lbs.	165	185	215



BASEMENT SASH are made as complete units, sturdily constructed of steel and welded. Sash are removable from the frame and most are equipped with an arm to permit holding in several open positions.



ADJUSTABLE POSTS are available in a variety of sizes to fit applications in cellars, under porches, in barns, etc. They are especially useful in correcting settling in older homes.

Basement Sash—Steel

Glass Size	Masonry opening	Wt.
15x12—2 lt.	32⅞x14⅜	18#
15x16—2 lt.	32⅞x18⅜	21#
15x20—2 lt.	32⅞x22⅜	24#

Attic Ventilators—For attic ventilation metal ventilators are durable and easy to install. Because they are standardized in sizes and made in quantities, the cost is low.

Louvred metal ventilators are made quarter round, half round, rectangular, and triangular, in a wide range of sizes. They are easily installed in either frame or masonry construction.

A comparatively new type, but one that has proved very popular in recent years, is the roof ventilator. Consisting of a shielded head, this ventilator is installed in hip roofs with no gable ends.

Basement Sash—Metal basement sash are usually of the pivoted type, with stop arms to permit two or more positions to hold the window open.

Standard sizes are 32x14¾", 32x18¾" and 32x22¾".

Bell Traps—For basement and garage floors to connect floor surface with drainage system and protect from sewer fumes. Made in three sizes: 6x6", 9x9" and 12x12".

Building Corners—Carpenters save time in applying siding by using these galvanized building corners. They eliminate the need of corner boards which require extreme accuracy in fitting siding and also eliminate mitering of the siding. Just saw the ends square and the metal corners furnish a neat, uniform joint.

No.	For Siding	Size Over All
1	6x½"	5½"
2	8x½"	7½"
2½	8x⅝"	7½"
3	8x¾"	7½"
4	10x½"	9½"
4½	10x⅝"	9½"
5	10x¾"	9½"

Building Ventilators—Provide access of fresh air under porches, buildings without basements, attics, closed lofts, vegetable rooms, soffit spaces, etc.

Adjustable foundation ventilators have two plates, one of which is moved by means of a knob to close or open the ventilators. They have 30% open area. They are especially useful in vegetable rooms and to provide a controlled air intake into homes with airtight construction. They are made of cast aluminum or cast iron painted with prime coat.

Made in three sizes: 8x5¾ in.; 12x7¾ in.; 16x7¾ in.

The continuously open type is made in two styles: bar type and diagonal grid.

Both are made in six sizes: 8x8 in.; 12x8 in.; 16x8 in.; 12x12 in.; 18x12 in.; and 24x24 in.

All building ventilators are supplied with or without insect screen.

Caps and Bases—Steel Basement Columns are strong, economical, neat in appearance, easy to install and require less space than the old-fashioned brick column in the basement. Made of new steel pipe 4-in. outside diameter, having wall 11 gauge thick. Painted. Lengths including pressed steel cap and base, 6, 6½, 7, 7½ and 8 ft. Special lengths cut to order. Clips are available for fastening steel caps to I beam to save drilling of the beam.

Adjustable Posts provide extra support in basements, etc. to correct settling from old floors and warped beams. Adjustable every three inches up to 8' 4" fully extended length of the post. Supports loads up to 22,000 pounds.

Circulating Fireplace—An improved metal fireplace unit which supplements the radiant heat from the open flame with a generous amount of air "warmed" by conduction through steel plates at back, sides and above the fire and by convection, circulated throughout the room or adjoining rooms.

It is a complete, correctly proportioned metal unit including the damper. The inside of the fireplace is already accurately built which eliminates errors of inexperienced workmen. For further details see Fireplace Section.

Coal Chutes — For 8" walls—opening size 24"x17"x8" Solid Steel Door, glass. For 12" walls—opening size 24"x 17"x12" Solid Steel Door.

Corner and Jamb Guards—Wheels Guards made of cast iron to protect doorways and corners of buildings. Three substantial concealed anchors are provided for the 60 in. Guard which is built into the wall. Two ½x8 in. bolts are furnished with each of the other 3 sizes.

Guards should be set in cement drive about 1 in. to provide additional anchorage.

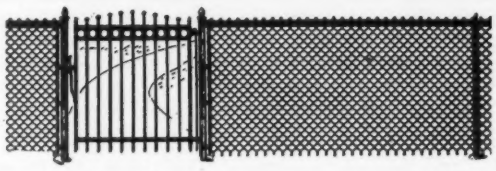
Corner Guards are made in three sizes: 22, 30 and 60 in. in height. 60-in. type protects against projecting truck bodies or loads. (See right)

Jamb Guards bolt against flat surface of the door jamb giving positive clearance in entrance and exit of vehicles. Indispensable in public garages, service stations, warehouses and terminals. Does not diminish effective width of door.

Thar's gold in them thar products

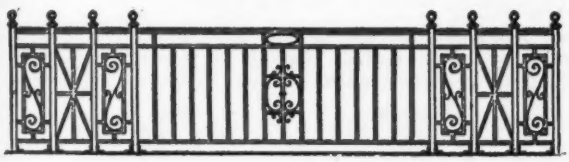
...and it don't take much pannin' either

These Stewart profit-producing products are right up every building supply dealer's alley. Your customers use many of them, and there's no reason why you shouldn't supply *all* their requirements. Hundreds of dealers are doing it and realizing a neat profit without investing money or carrying any stock. Our dealer plan is simple. It's profitable, too, because Stewart products allow a good margin for the dealer. What's more, you are selling nationally advertised, high-quality products. Write today for full details.



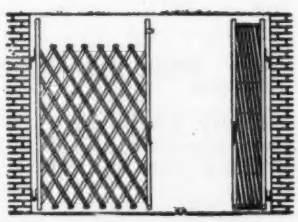
Style OTM Chain Link Wire Fence is used extensively for residential purposes. Made in several heights, weights and types of construction. Iron or wire gate is optional.

Style 111-S Iron Picket Fence protects as well as beautifies residential property. Iron fences are made in a wide range of designs in plain and ornamental iron.

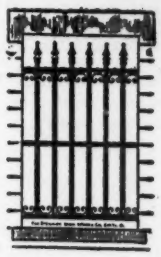


IRON RAILINGS
for porches, stairs, balconies, stoops, decks, etc., are made in many designs in plain and ornamental iron. A necessity for almost every home.

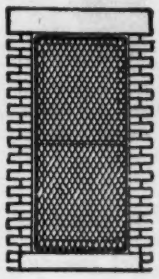
STEEL FOLDING GATES
are made in single or double gate construction, with or without overhead track. When requesting prices be sure to give width of opening, height of gate desired, and means of supporting overhead track if one is required.

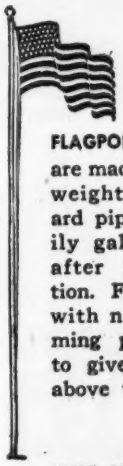


Stewart style 3TH Non-Climbable Chain Link Wire Fence is recommended for remote property lines where the utmost in protection is desired. This style is made in several weights and heights with overhang arrangement for 3 or 5 strands of barbed wire.



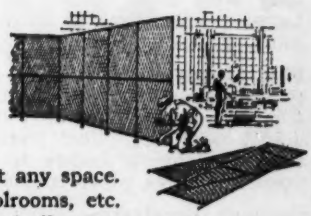
WINDOW GUARDS
in either iron or wire are made to fit any size or shape opening. Iron guards are available with round or square pickets. When requesting prices on window guards, please send sketch and give all measurements involved.





FLAGPOLES
are made of full weight, standard pipe, heavily galvanized after fabrication. Furnished with non-jamming pulley. Be sure to give desired height above the ground line.

ORNAMENTAL IRON LANTERNS
Iron lanterns are good selling items because they are used for all types of homes. Pier style No. 317 is illustrated. Lanterns are made in several sizes, combinations of metal, and a variety of finishes. Also available in bracket styles.



WIRE MESH PARTITIONS
are sectional with standard panels, and may be arranged or interchanged to fit any space. Ideal for storage rooms, toolrooms, etc. Send diagrammatic sketch and all measurements when writing for prices.

In addition to the products illustrated, Stewart makes many other items in iron, wire and bronze. Get acquainted with the entire Stewart line. Write for dealer plan today. There is no obligation whatever. If you are interested in some particular item, tell us and we'll send complete information.

Stewart PRODUCTS

THE STEWART IRON WORKS CO., INC.
Stanley M. Stewart, Pres.
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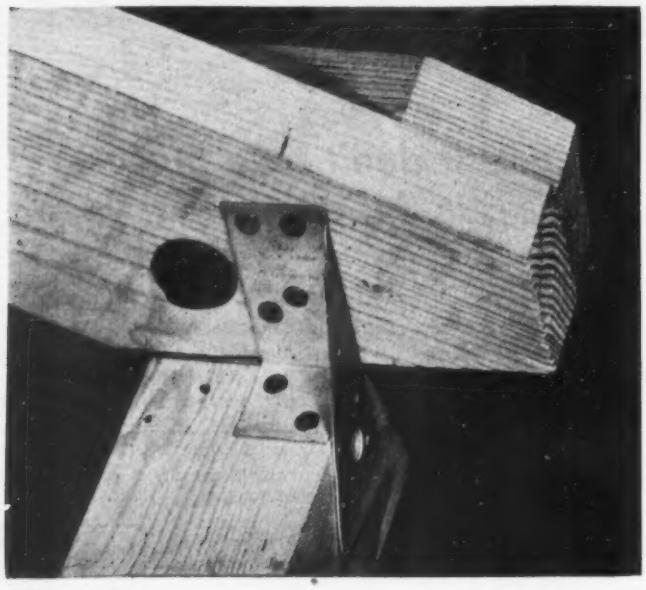

THE metal framing anchor shown above is one of three types available for house and farm building framing. These, together with ring timber connectors for truss assemblies, offer new time and materials savings in wood framed buildings.

METAL LATH is an important building product. Because of its durability, ease of installation, and resistance to fire, it is a high quality base for plaster.

Dampers for Fireplaces — Dome dampers, properly installed, provide efficient draft control and smooth, correct passage for smoke and fumes. There are three types of operating control devices: rotary, poker and chain. List one for fireplace.

No. Size of Damper	Width of Fireplace opening	Size of Flue Recommended in inches	Equivalent in Round Flue Construction in inches
24	24	8½x13	10
28	28	8½x13	10
30	30	8½x13	10
33	33	13x13	12
36	36	13x13	12
42	42	13x13	12
48	48	13x18	15
54	54	13x18	15

Door Buck Anchors—For securing jambs or rough bucks to masonry walls. Made of 2x1/16-in. flat steel, 12 in. long with 2-in. turned up and perforated for nailing. Large perforations in long arm for anchorage in mortar joint. Space 2 ft. apart.

Flue Thimbles—Adjustable galvanized steel cylinders that provide economical flue connections. Made in two sizes, 4 inches deep—for 6 or 7 inch openings, and for 6, 7 or 8 inch openings. Cast iron thimbles are available in diameters from 3 inches to 12 inches and are used for inserting stove pipes in masonry chimneys.

Garbage Receivers—Outer shell made of 16-gauge copper-alloy steel strengthened by corrugations at top and bottom. Bottom open to permit drainage and stiffened by galvanized cross rods on which pail rests. Heavily painted with asphaltic paint.

Container or pail made of copper-alloy steel galvanized after fabrication. Ample clearance for lifting out pail which is slightly tapered to facilitate removal and return. Service lid made to close fit to larger cover which is hinged to outer shell and opened only when pail is removed. Made in 3 sizes: 10, 15 and 21-gal. capacity.

Fireplace Accessories—A wide variety of decorative and functional items for equipping a fireplace. Made of wrought iron, brass, bronze, and plated castings, accessories include andirons or fire basket, screens, scoops, brushes, tongs, pokers, log baskets, ornamental cranes, etc.

Framing Anchors: The photograph of the metal framing anchor in this section shows one of its primary functions. These simple devices speed the installation of truss rafters, studs, headers, corner posts, and headers.

For example, when spaced on the cap plates of the house walls in advance, they permit the erection crew to raise the truss in place, push it against the framing anchor, and fasten it securely in place by means of a few nails through the pre-drilled holes in the anchor. Not only is the truss quickly and accurately installed, but the roof is secured against uplift due to high winds.

In their several applications, these anchors eliminate weakening of framing joints due to improper toenailing; they provide added frame strength at all points where they are used; they eliminate notching and shimming of joists; they increase frame rigidity around openings and corners; they anchor rafters more securely to plates; they develop both shear and tension resistance; and they reduce internal wall plaster cracks.

The anchors are made of zinc coated steel to resist corrosion. All are supplied with the special nails used in their installation.

Joint Angles — To support joist ends where joist joins girders and headers; 7" for 2 x 8 joist; 9" for 2 x 10 joist.

Joist Anchor—Provide secure anchorage for joists supported by brick walls. Nailed to top of joist and embedded in masonry with vertical crossrod.

Length	Size
14"	1 x 3/16"
18"	1 x 3/16"
18"	1¼x¼"
40"	1 x 3/16"
55"	1¼x¼"

Joist Hangers — A strong, safe, economical method of joining ends of joist to supporting members. For proper use see FHA Bulletin. Supplied for 2 x 8, 4 x 8, 2 x 10, 4 x 10.

Lath, Metal—See Section 21, Plaster and Plastering Products

Laundry Chute Doors — Inward opening, self-closing. Complete unit with door and frame. Finished with gray priming coat.

Wall Opening		Door Opening		Overall Size	
Width	Height	Width	Height	Width	Height
9"	12"	8⅛"	11"	11"	13⅞"
8"	11"	7 "	10"	9"	12 "

Mail Receivers—A metal chute which connects the inside and outside walls of a home and has a door at each end. Substantial outer doors provide complete weather resistance. There are no springs or other parts to get out of order, no keys to lose. Easy to install, in frame, brick or stucco construction, attractive and low in cost. Designed with horizontal and vertical doors. Bodies are made of galvanized steel, the outer door of cast brass, bronze or aluminum, the inner door and frame of cast aluminum.

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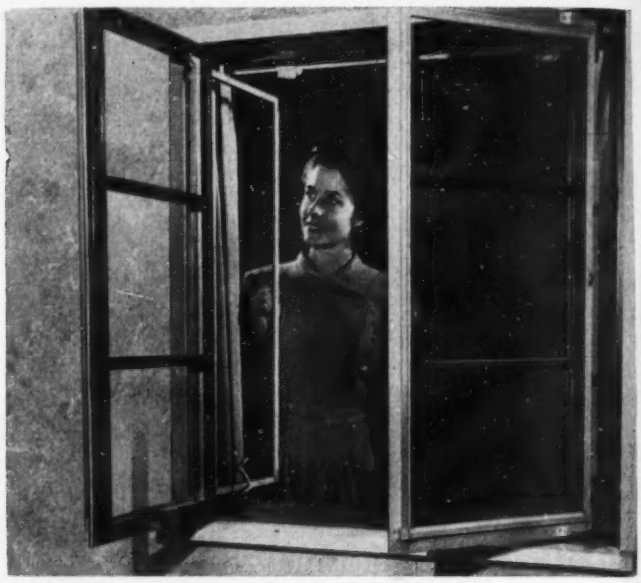
METAL SIDING materials are made in several types, for a wide range of structures. Here, aluminum bevel siding is to be applied on a residence.



WINDOWS OF aluminum and steel are manufactured for all types and styles of construction. Complete units of casement, double hung, and projected are available.

Outdoor Fireplaces—Made in a variety of styles and sizes—both portable and permanent. Include simple grills to complete cooking units.

For complete details of types, sizes and construction data, write manufacturer. All publish detailed catalogs of their particular equipment.

Package Receiver—Metal units similar to mail receivers, for installation in masonry or frame wall, permitting packages to be delivered from outside and received on inside without opening house door. Made in several sizes and supplied as complete assemblies.

Screens, Window—See Section 6, Hardware

Stanchions—To support beams in basement. Strong, economical, neat in appearance, easy to install. Made of steel pipe, 4 and 5 inches in diameter. Caps and bases are available. Standard lengths, 6 ft., 6½ ft., 7 ft., 7½ ft. and 8 ft.

Stone Anchors—For attaching stone to backup wall. Made of flat steel ⅛x1 in. with reversed angle bends at each end. Hot galvanized after forming. Standard length 6⅛, 8⅛, 10⅛, 12⅛ in.

Thresholds—Made of brass or aluminum 4 in. wide. They give long wear, assure a close fitting door and make a neat, attractive joint where contrasting materials meet. Height, ½ in. Supplied in 15 ft. lengths undrilled or cut to length specified with countersunk holes and including brass or aluminum screws. Lead expansion shields are available.

Timber Connectors: The most common type of several available connectors is the split-ring type. Its widest use is in truss assemblies, and by using the connectors to join the truss members together, considerable strength is added to the assembly.

The split ring connector is installed by means of a special tool that cuts a circular groove half the depth of the connector in each of the members to be joined. The two members are held together by a single bolt and nut through the exact center of the ring.

Utility Windows—A general-purpose, metal framed window of sturdy construction and simple design. Substantially made by welding ⅛-in. thick, hot rolled steel members. Widely used in shops, garages, store rooms, basements, recreation rooms, studios—wherever a spacious, strongly built window is required.

Wall Ties—Used for tieing face masonry to backup wall, or securing veneer to wood backing. Made of galvanized steel. Usual weights—35 lbs. per 1,000, and 48 lbs. per 1,000.

Wall Plate Ties—Used in pairs to strengthen wood construction where partition plates are discontinuous due to heating ducts. Ties do not interfere with ducts or plaster base. Made of 20 gauge steel 18 in long for studs 16 in. O. C. with nail holes for fastening to wood framing.

Wall Plate Anchors—For anchoring sill to foundation and roof plate to brick wall. Made from ½ in. rod with 2 in. bend at end. Two lengths 12 and 18 in. Furnished with nut and washer.

Wall Plugs—Wall Plugs are needed wherever wood members must be nailed to masonry wall. They are the standard method of attaching wood furring to support lath or wall board. Also used in application of woodwork, wainscoating, etc. Deeply corrugated, heavy galvanized, they afford a sure grip on nail and resist corrosion. Side construction excludes mortar. Sizes 2¼x3 in.

METAL WINDOWS AND DOORS

Various metals are utilized today in the fabrication of windows, doors, and cabinets. Aluminum, steel, and certain alloys are the most common metals used.

Metal windows are supplied in a full range of sizes, and in casement, double-hung, and projected types. They include the complete assembly, including frames, balancing systems, and even is some cases combination screens and storm sash. They may be mounted in any rough opening, either masonry or wood.

Steel metal doors are not new to the construction industry. Their major use has been in industrial and commercial structures. Now lightweight metals are being used for combination and sliding doors in residences.

For further details see Section 3, Windows, Doors, Millwork; Section 17, Kitchen, Laundry, Bath.

ALUMINUM IN BUILDING PRODUCTS

Aluminum Roofing and Siding: Aluminum roofing is available in corrugated sheets, in 2½ inch and 1¼ inch corrugations. The most popular width and thickness is 0.024 inch x 26 inches, and the sheets are supplied in 6, 8, 10, and 12 foot lengths. Accessories such as ridge roll, formed valley, roll flashing, are also available.

Crimp roofing, interlocking sheet roofing, and individual formed shingles are also made of aluminum. These latter products are made to provide a deep shadow line at the base, and are laid in an alternating pattern the same as other shingles.

Aluminum siding has been on the market for some time both in sheet and clapboard style, the latter type providing a traditional colonial finish to a home. It is made with an 8-inch exposed face in 12-foot lengths, and may be obtained with either a plain, smooth surface or a special mechanically textured surface.

Erection is easy and fast. A starter strip is nailed flat against sheathing or studs, and the rest of the siding is automatically aligned by this strip. Special corner caps are applied as corners are reached.

Also available is a weatherboard siding, aluminum sheets with 24-inch vertical coverage and a length of 8,

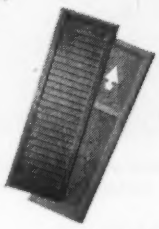
LEIGH BUILDING PRODUCTS

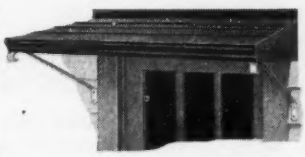
— will give added convenience, beauty and saleability to your homes.

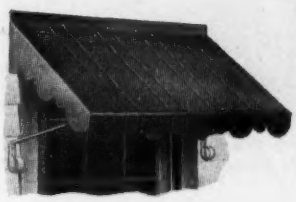
Leigh BUILDING PRODUCTS

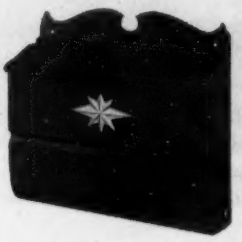
The Leigh Line is a complete line of metal building necessities that have received universal acceptance from home owners and builders. Each unit is built to fill a definite need in a more attractive and efficient manner.

Use Leigh Products on your new homes or remodeling jobs. You'll find they add that extra touch that closes the sale.

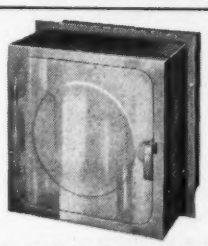

SHUTTERS

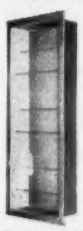

DOOR CANOPIES

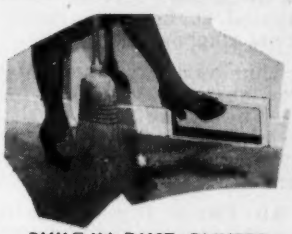

WINDOW AWNINGS

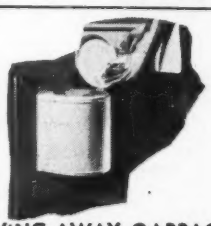

MAIL BOXES

CLOTHES CHUTE DOORS

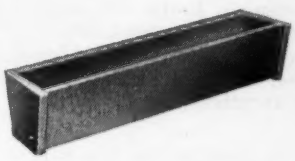

PACKAGE RECEIVERS


RECESSED SHOE RACKS

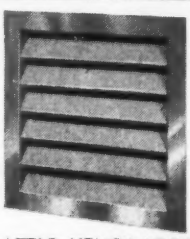

BUILT-IN DUST CHUTES

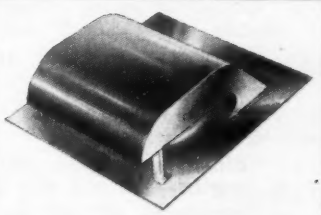

SWING-AWAY GARBAGE CONTAINERS

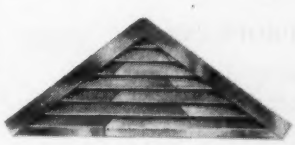
SCREEN DOOR GRILLES

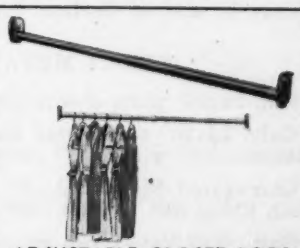

FLOWER BOXES

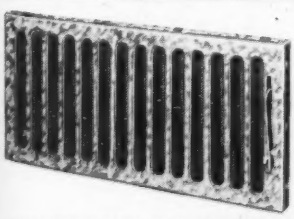
BUILT-IN MAIL CHUTES

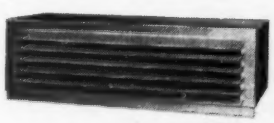

ATTIC VENTILATORS

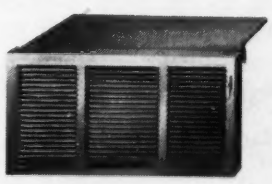

ROOF VENTILATORS

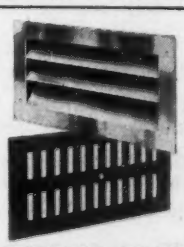

ADJUSTABLE TRIANGLE VENTS


ADJUSTABLE CLOSET RODS


HEAVY DUTY FOUNDATION VENTS


BRICK VENTILATORS


FOUNDATION VENTILATORS


THRU-THE-WALL VENTILATORS

If you do not have a copy of the latest Leigh Catalog 52-L showing the complete Leigh Line — Write us direct for your free copy.

LEIGH BUILDING PRODUCTS DIVISION

AIR CONTROL PRODUCTS, INC.

COOPERSVILLE MICHIGAN

COMPLETE metal cellar door assemblies are an excellent dealer item to satisfy the increasing popularity for homes with outside basement exits.

CORRUGATED galvanized steel have long been used for roofing and siding on farm, commercial, and industrial buildings.

10, or 12 feet, erected horizontally so the rows of 4 inch exposed surface run horizontally and look like conventional clapboard.

Aluminum Structural Members: Use of aluminum angles, channels, and extruded sections, as well as continuous-roll-formed strip is also expanding greatly. Already certain sections have been standardized for studs, roof trusses and various other structural framing and supporting members.

Air Ducts: One of the most important shifts in materials has been the widespread adoption of aluminum for air ducts in heating, ventilating and air conditioning systems for both homes and commercial structures. With the slightly added cost of the metal (approximately 6½% more than commonly used materials), there are certain advantages that make it worthy of serious consideration.

Greater heating efficiency comes from aluminum's lower heat radiation power and smoother surface, cutting actual BTU loss and permitting air transmission with a minimum of power.

Aluminum has also become quite popular for the fabrication of windows, hardware, and numerous items. For further information refer to Section 4, Windows, Doors, Millwork; and to Section 6, Hardware.

SHEET METAL PRODUCTS

Gal. 24x96" plain sheets (26 gauge.)

Galv. 24x96" corrugated sheets (26 gauge) 1¼" corrugations—full width 26" covering width 24"—8' lengths.

Corrugated Ridge roll—2" roll—4" apron—26" lengths. Plain Ridge roll—2" roll—26" lengths.

Galv. Roll Valley (26 gauge) 16" width—50' rolls.

Eaves drip edging—1x1x4"—10' lengths.

Rake roll—1x2"—10' lengths.

Flashing shingles—5x7".

Metal corner miters for siding application (reversible for inside or outside corners) 6", 8", 10".

Exterior metal corner bead for stucco—or asbestos shingle siding—10' lengths—20 pcs. per bundle.

Finials—(for end of ridge cap.)

Window casing moldings for stucco or siding application (with miters) 10' lengths—500 lin. ft. per crate.

Access door assemblies — for plumbing, heating and wiring service centers—stock size 13x17" hinged.

Furnace pipe (lock joint-nested) 26 gauge—2' lengths—5", 6", 7", 8" diameter.

Furnace pipe elbows—45°—90° adjustable.

Furnace pipe casing collars.

Furnace pipe tee joints.

Furnace pipe dampers.

Ventilating louvres—8x12", 12x12", 8x16"—with rustproof screen back.

Metal wall ties for veneer masonry.

Pressed steel mail boxes—house attached or box type.

Pressed steel mail boxes—rural—post secured box with flag indicators.

Picture mold inserts in plaster walls 10' lengths.

Base screeds—½" grounds—in plaster walls—10' lengths.

Solid wing corner beads—small nose.

Solid wing corner beads—bull nose.

(Furnished in 7-8-9-10 and 12' lengths—500 lin. ft. per crate)

"Tin" or "Terne" Coated Steel:

Valley flashing—10" and 14" wide—paint both sides—furnished in 50' rolls.

Roofing—flat plates for porch or deck roofs—size 20x28"—25 lb. coating—packed 112 sheets per box—(approx. 400 sq. ft. coverage.)

Gutter or eaves trough hangers (strap type) for 3", 4", or 5" eaves trough.

Gutter or eaves trough hangers—malleable adjustable shanks—3", 4", or 5" eaves trough.

Leader clamps for 3" and 4" dia. leaders.

Strap type.

Clamp type.

Ornamental type.

"Blued" stove pipe—28 gauge 3", 4", 5", 6" diameters—2' lengths—100 pcs. per box—(stock 3", 4", and 5".)

Corrugated 90° elbows—each size.

Adjustable sectional elbows.

Flue size reducers—6" to 5"—6" to 4"—6" to 3".

Dampers—for stove pipe.

Stove pipe collars.

Contractors' Metal Products Equipment Items:

Mortar boxers (assorted sizes.)

Mortar tubs.

Mortar hods.

Scaffold brackets.

Ladder brackets.

Roofing brackets.

Wheel barrows.

Water pails (galvanized) 8-10 qts.

Mortar pails (galvanized) standard.

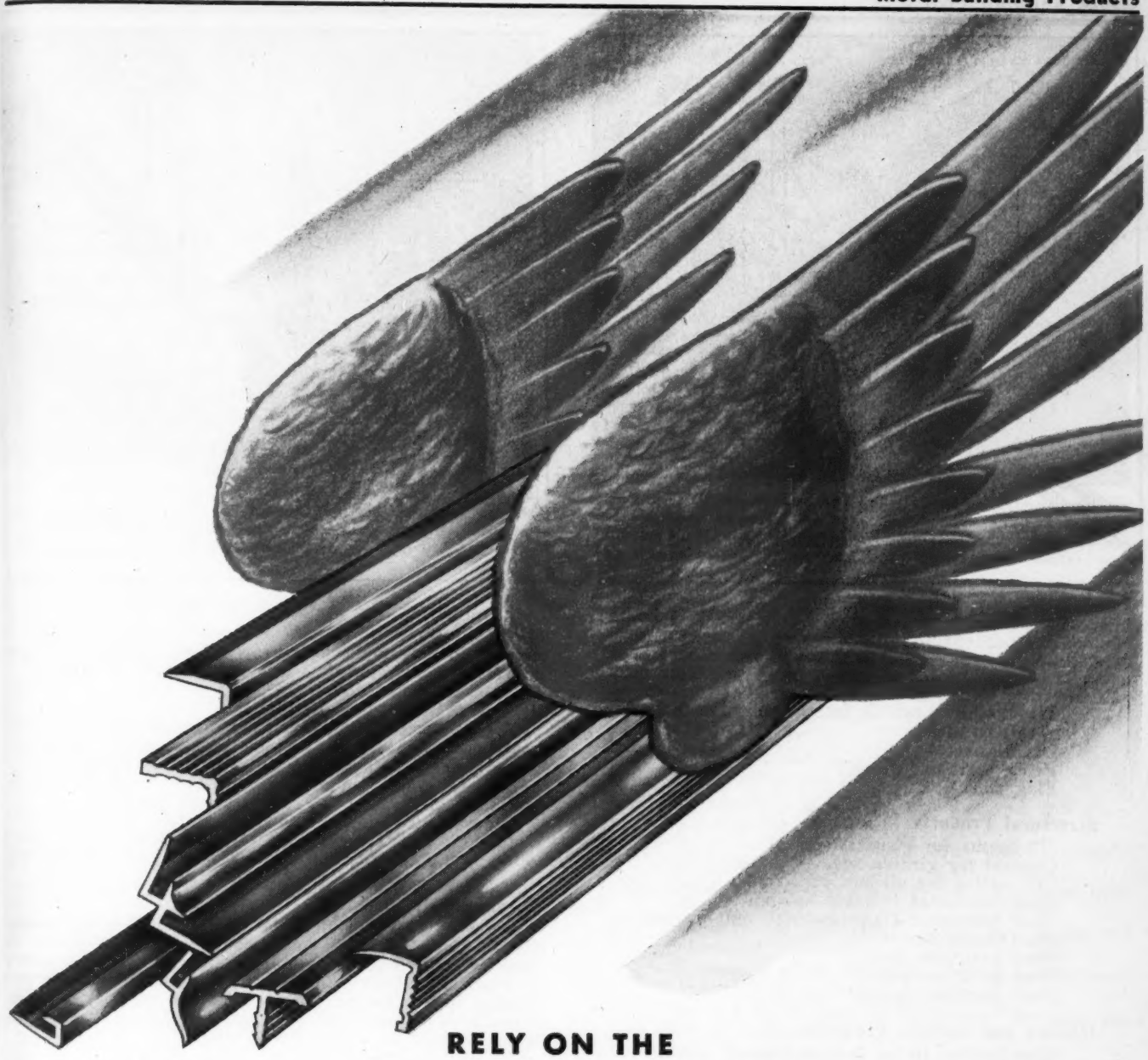
Hoisting pulleys (well wheels.)

Hoisting devices (block and fall.)

"Crow" bars—6', 7', 8'.

"Pry" or wrecking bars—18", 24", 30".

(For hoes, spades, shovels, and mechanics' tools, etc., refer to Section XI.)



RELY ON THE DEPENDABLE SUPPLIER

tie up with the dependable name in metal mouldings

Sounds trite to say—"Rely on the dependable supplier" . . . but not these days. Slipshod deliveries, shortages, hot air promises make a dependable supplier of metal mouldings or other products of dollar-and-cents importance to you.

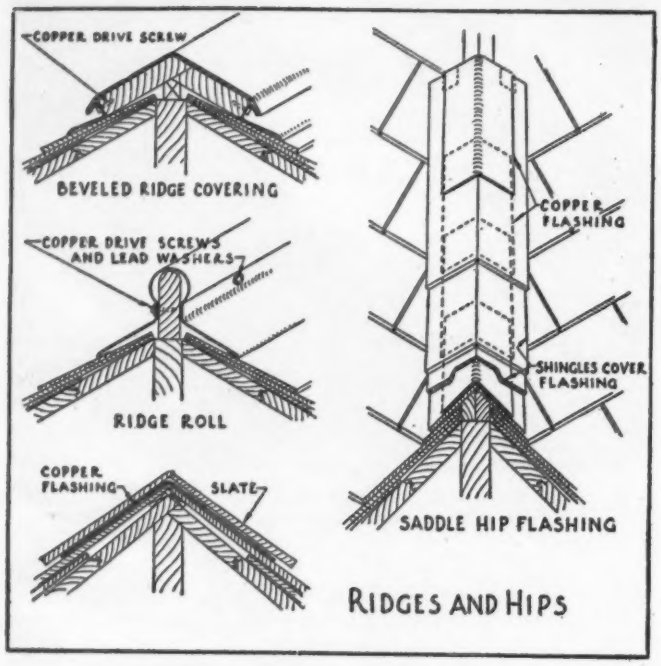
Now is the time, as many of our new customers tell us, to tie up with a dependable name. Ask any of our customers, new or old, about Youngstown's reputation. You will find we have been dependable suppliers of metal mouldings for some 25 years.

For a steady and stable source for metal mouldings, ask for name of our nearest distributor.

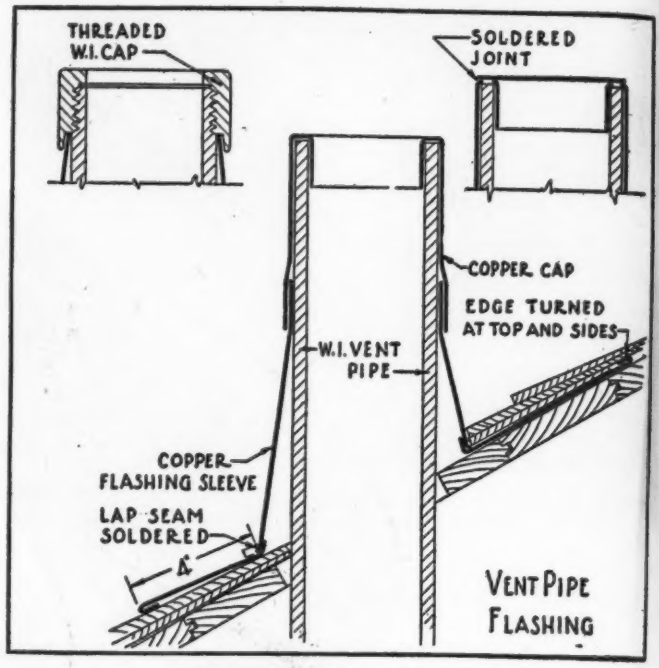
SUPERIOR METAL MOULDINGS

YOUNGSTOWN MANUFACTURING, INC.

66-76 S. Prospect St. • Youngstown 6, Ohio



DETAILS of flashing for ridges and hips.



VENT PIPE flashing is shown here.

Metal Products—for special order:

Ornamental Products

Wrought iron railing for stairs—porch rails, etc.
Weathervanes
Lamp posts
Fence posts and gates
Flag poles

Structural Products

"I" beams for girders, etc.
Channel for girders, etc.
"T" section for girders, etc.
Steel fabricated framing—plain
Steel fabricated framing—with nail grooves
Steel junior beams
Steel partition studs
Steel partition plates
Steel partition jambs

Heating and Furnace Products

(See Section 10 for Related Items)
Furnace jackets
Furnace bonnets
Warm air ducts—horizontal
Warm air wall stacks—vertical
Warm air wall stacks—fittings
Warm air boots—offsets, etc.
Warm air floor registers
Warm air ceiling registers
Warm air wall or base board registers

Metal Siding, Roofing, and Misc. Products

(See Section 8 for Related Items)
Metal roll roofing
"V" crimp roofing
Brick face siding
Rock face siding
Beaded siding
Skylights
Ornamental metal ceiling
Ornamental metal cornice
Steel wall tile
Rotary roof ventilators

Nailable Steel: A recent development in the metal building products field is the production of steel framing members for homes and commercial buildings. These include studs, joists, rafters, etc., and they are so designed that flooring, sheathing, or decking may be applied by nailing. Such framing construction has great stability, and can be erected quickly and efficiently.

While this method is comparatively new, several large housing developments in the United States that have been completed during the past year, have employed this type of framing with exceptionally satisfactory results.

FLASHINGS

The penetration of water through roofs and walls presents one of the major problems faced by architects, engineers and builders. The most effective means of providing protection against such penetration is by the installation of flashings of copper sheet and strip.

The various points at which flashings are customarily installed in good construction work are: open valley; closed valley; chimney; ridges and hips; vent pipe; roof and wall intersections; windows.

Through-wall Flashings

In recent years, building designers include specifications for embedded through-wall flashings at such points as spandrels, cornices, copings and belt courses. Other points at which through-wall flashings have proven effective are: window lintels and sills, parapet walls, chimneys and intersections of walls and roofs such as found on a promenade tile roof or a pent house wall.

Sheet copper is frequently specified for flashings, gutters and downspouts because it combines the attributes of durability, beauty and economy. The principal reason for the long life of copper is the fact that this metal develops by exposure to the elements a protective coating called patina, characterized by a soft green color.

Hot rolled copper with its relatively softer temper is suitable for valleys, flashings and roofing sheets. Where additional strength and stiffness are required, such as gutters and downspouts, cold rolled copper is frequently used.

Manufacturers of copper flashings, gutters and downspouts claim it is one of the most economical materials that can be used, since the slightly higher initial cost is amortized over the life of the building by the virtual elimination of maintenance expense.

Complete information regarding the proper application of sheet copper for roofing and other uses in building construction is available from the Copper & Brass Research Association, 420 Lexington Ave., New York 17, N. Y.

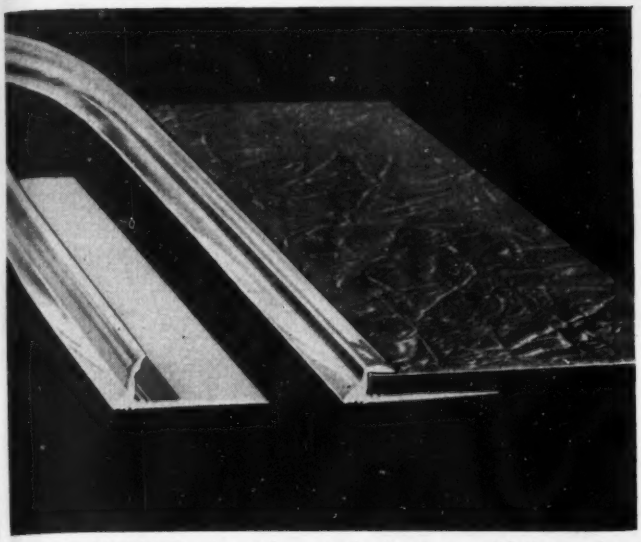
Both galvanized and copper troughs and fittings are regularly supplied in two types of connecting joints:

The "lap joint"—(which is soldered on the job)

The "slip joint"—(which eliminates solder)

Leaders, "down spouts", or conductor pipe is supplied in "plain round", "round corrugated", and "square corrugated"—in both galvanized iron and copper.

"Round" types come in 2", 3", 4", 5", and 6" diameters; "square" types, 1¾x2¼"—2⅜x3¼"—2¾x4¼", etc.—with each of these, approximate fittings; i.e., "ells",



METAL MOULDINGS of stainless steel, aluminum, nickel, etc. have broad uses in both homes and commercial buildings. They provide an excellent edging for counters, tables, shelves; as well as for joints and corners in wall panel installation.

PREFABRICATED metal farm and utility buildings of many designs, and for many purposes, are now manufactured. Here a series of grain bins are being set up on a farm. The trend toward surplus crop storage by the farmer himself has increased this market.

"sweeps", and "shoes" are required for each size and pattern—and either in galvanized iron or copper.
Ornamental conductor "heads" and ornamental straps; also conductor fasteners—either round, corrugated, or square—of tinned malleable iron are required.

To prevent clogging from leaves, etc., conductors are fitted with wire strainers—either copper or galvanized—either square or round—in several sizes.

Dealer's procedure:—in view of the many alternatives, the simplest method of handling appears to be a display board on which the several sizes of trough—conductor pipe—and fittings can be attractively mounted.

Any plan can be quickly analyzed to find the amounts and sizes required—and after the pattern and metal have been selected, the required units can be ordered as a "package" shipment from the approved sheet metal distributor.

When preparing the "take off" sheet, care should be given to insure that either "lap joint" or "slip joint" is ordered throughout; likewise the sizes of fittings—number of inside and outside miters—end caps—outlets, etc.

Technical Data for Salesmen — To estimate eaves-troughs and down-spouts, proceed as follows:—

1. Measure or scale plan elevations—and arrive at total lineal feet of eaves-trough and down-spout for each size (as porch sizes may be smaller than main roof).
2. Check plan to find number of leader outlets, end caps, inside and outside corner miters, elbows, shoes, funnels and strainers.
3. Resolve eaves-trough and leader total lengths into 10 ft. sections; for example—if the plan measurements result in 64 lin. ft., order seven 10 ft. pcs. or 70 lin. ft., etc.
4. To find number of eaves-trough hangers and down-spout hooks or clamps, figure one to each three linear feet.
5. Prepare list and estimate in two price columns; one for "galvanized" and the other for "copper".

INTERIOR DECORATIVE METAL PRODUCTS

Metal Mouldings and Trim—

Metal mouldings—these are supplied in several types, and depending on available sources or the pattern now in use in the counter cabinet Millwork Department—should determine which style and material should become "stock".

Decorative mouldings are made of either—

Rolled shaped steel—stainless
Rolled shaped steel—chromium plated
Rolled shaped steel—"snap on" mouldings (either chromium plate or stainless)
Rolled aluminum
Extruded aluminum

Metal "wood core" mouldings—either brass, aluminum, stainless, or chromium plate members—where thin metal shaped patterns are mechanically embedded and secured to a wooden core filler.

Zinc mouldings used primarily for exterior application on existing homes where asbestos siding or asphalt siding shingles are applied over old walls. They are supplied in two patterns—

Inside and outside corners
Frame strips for doors and windows

Interior decorative mouldings are designed for many applications among which are:

"Cap" mold for covering type edges of board products.

Inside and outside corners—for walls—sink back splash, etc.

"Divider" or joint strips where two sheets are joined.

Fabricated rolled sink rims to effect seal between sink and counter top.

Counter edge—plain or "bull nose" for edge finish on linoleum tops.

Stair tread nosings.

Stair tread coves.

Recessed mouldings which provide space for decorative matching linoleum strip inserts.

Bathtub edge.

Because of these many variations and also by reason that they are not an immediate requirement, the logical procedure would appear to be the mounting of the various members on a display board; and, after the customer has expressed his preference as to style and type of metal, to analyze the plan and prepare an order to the distributor.

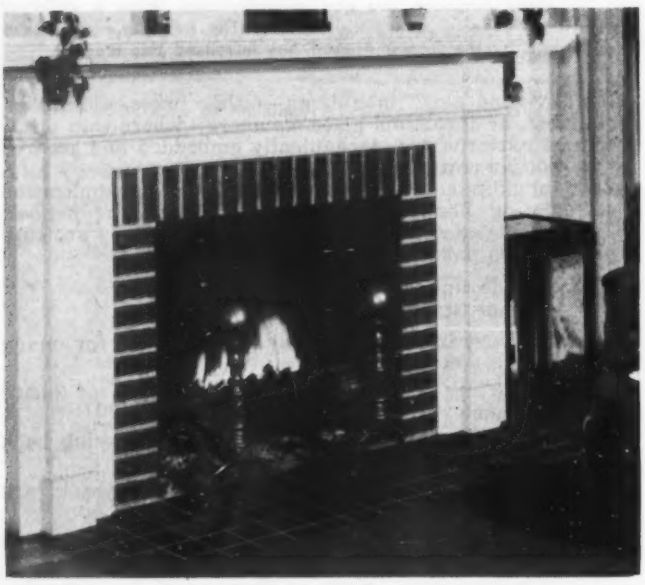
In doing the above, resolve plan lengths into total linear feet of each pattern and write order to nearest larger number of stock lengths—to allow for cutting and fitting waste—and also because very short ends are seldom usable.

However, for small jobs or "over counter" sales, a limited stock of one type or pattern may well be kept as an inventory item. This could consist of:

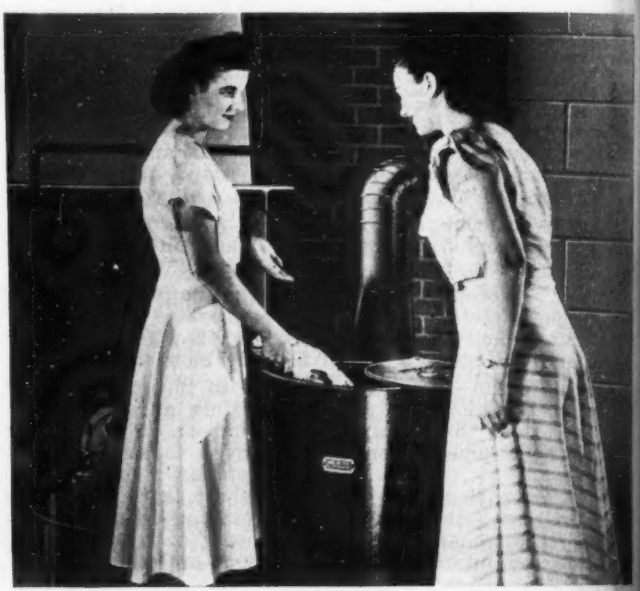
Standard cap moulding.	8'0 or 12'0 lengths	20 pcs.
Joint strip—or divider..	12'0 lengths	20 pcs.
Cove	12'0 lengths	20 pcs.
Inside corner	12'0 lengths	20 pcs.
Outside corner	12'0 lengths	20 pcs.
Counter edge	12'0 lengths	20 pcs.
Stair tread moulding...	12'0 lengths	20 pcs.

Packaging by manufacturers in long cardboard or fiber tubes affords convenience in handling—storing—and protection of stock.

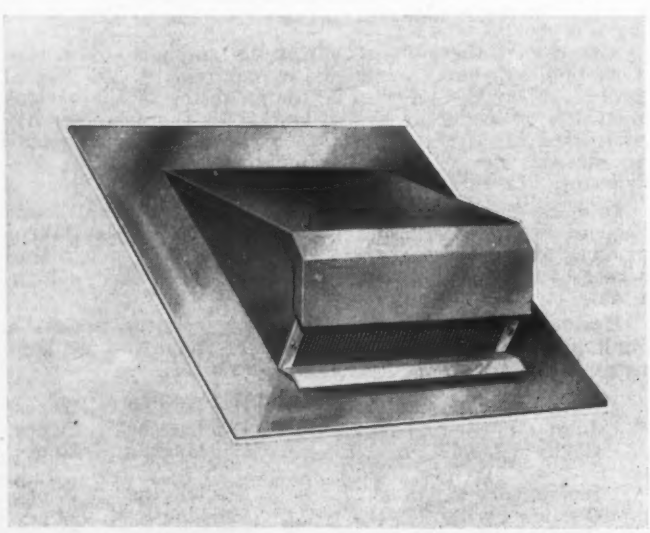
LAUNDRY AND DUST chutes make housekeeping much easier. These products are manufactured as units, are easily installed in most houses, both old and new. They particularly should be demonstrated to any prospective home builder.



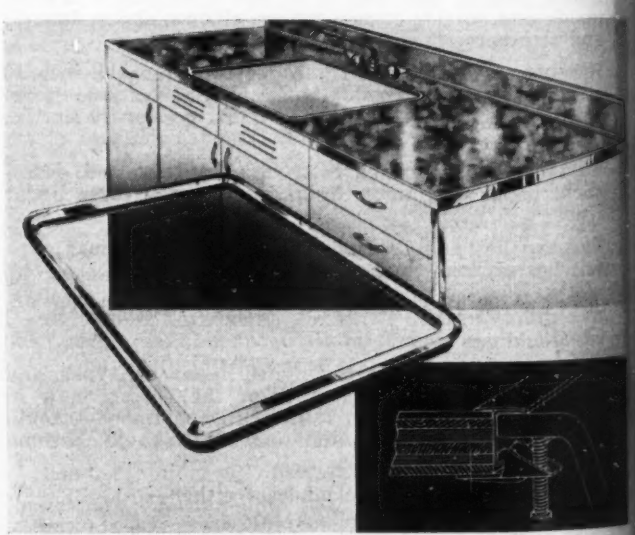
EQUIPMENT for a fuel burning fireplace are essential to the proper use and enjoyment of any fireplace. Modern equipment is so attractively designed and made that it serves both a functional and decorative purpose.



HOME INCINERATORS add so much convenience in a home that they make an excellent sales item for a dealer who promotes them.



ATTIC LOUVERS provide essential summer cooling, help prevent condensation during cold weather. Designed to fit roofs of any pitch the metal louvers above is flanged, baffled and screened and easy to install.



METAL SINK frames provide a permanent, watertight, sanitary cabinet sink installation. The frame shown is of satin finish stainless steel that blends perfectly with any type of interior decoration.

Donley
METAL BUILDING
Products

metal products
for
homes, apartments
and the out-of-doors

DEALERS READY REFERENCE

attic ventilators, rectangular, triangular, half-circle, quarter-circle; roof ventilators; installing methods and dimensions

foundation and brick ventilators

coal chutes and laundry chute doors

access doors; thresholds; flue thimbles; steel basement columns

milk and package receivers; mail receivers; garbage receivers

wheel guards, corner and jamb;

manhole covers and rings; cistern covers

sewer pipe strainers; bell traps; slop sinks

wall ties; cavity wall ties; wall plate ties

joist hangers; wall plugs; wall plate anchors; joist anchors; stone anchors

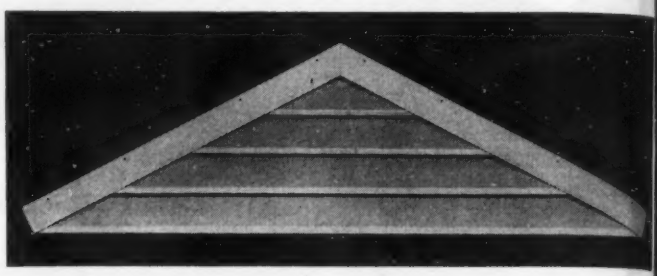
incinerators

DONLEY BROTHERS CO.
MILES AVENUE • CLEVELAND, OHIO

Tri-Vent Louver Ventilators

The triangular ventilator shown at right is made in four sizes to suit various roof pitches. It fits at the very top of attic for most effective ventilation. Being made of metal, the free air opening is large, as shown in table below in relation to the over-all size.

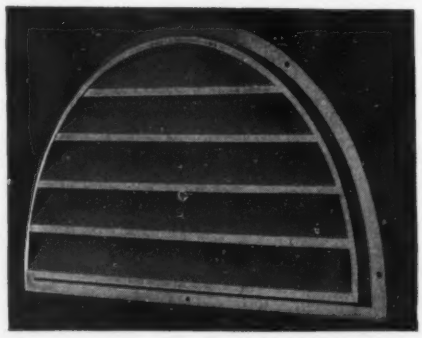
The broad flange at the top is nailed outside the gable facing with the body of the vent extending inward 2¼ in. Sheathing and siding are fitted snugly at the bottom behind a narrower flange, which serves also as a drip for storm water. Made in four sizes to be used with all roof slopes of 4 in. to 11 in. of rise to 12 in. of run. The ventilators

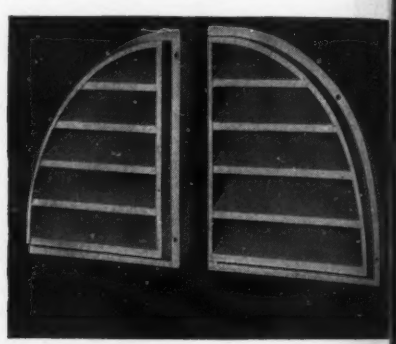


are No. 5-12, No. 6-12, No. 8-12 and No. 10-12. The wide top flange permits them to be used with a limited variation from the exact pitch of the ventilator. Limits of variation for each ventilator are shown in Roof Pitch table below.

Half and Quarter Circle Louver Ventilators

These ventilators fill the need where design or preference calls for other than rectangular-shaped ventilators. The half circle makes a handsome appearance in the gable. The quarter circles are used in pairs on either side of a chimney. Construction and installation same as rectangular type. Sizes are shown in the table below.





INSTALLATION OF DONLEY STEEL LOUVER VENTILATORS *(except Tri-Vent)*

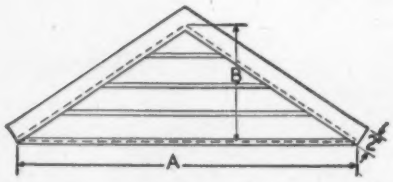
In Wood Construction—It is necessary only to cut an opening of the correct size in the sheathing. Then nail the flange to the sheathing through holes provided and put the siding against the frame of the ventilator which projects 1 in. beyond the sheathing.

In Brick or Stone Veneer Construction—Cut opening in the sheathing as above. Place ventilator so the projecting flange is immediately behind the facing of brick or stone and bring the flange to the back edge of the veneer. Then nail the ventilator to the sheathing and lay the veneer up to the flange.

No. 816 In Frame Wall

No. 816 In Brick Wall

In Brick Construction—Ventilator is recessed 3 in., the flange fitting between the mortar joints. Again no trim is needed.



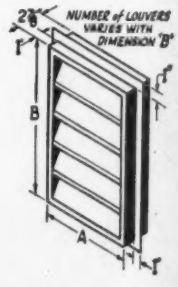
ROOF PITCH
(in inches)

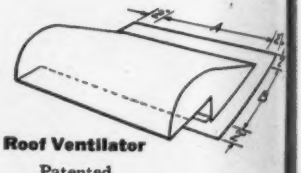
Ventilator No.	Normal Pitch Use	Minimum Pitch Use	Maximum Pitch Use
5–12	5–12	3 15/16–12	6 1/16–12
6–12	6–12	5 1/16–12	7 –12
8–12	8–12	6 15/16–12	9 1/16–12
10–12	10–12	8 11/16–12	11 5/16–12

TABLE OF DIMENSIONS

No.	Wall Opening, Ins. Width A	Wall Opening, Ins. Height B	Free Area in Sq. In.	Ship. Wt. Carton
811	8 1/16	11 1/16	26	6—26 lbs.
816	8 1/16	16 3/16	44	6—35 lbs.
1214	12 1/16	13 3/16	55	6—39 lbs.
1219	12 1/16	19 1/16	82	6—50 lbs.
1224	12 1/16	24 3/16	110	2—21 lbs.
1608 N.F.	16 1/16	8 3/16	37	6—34 lbs.
1608	16 1/16	8 3/16		6—36 lbs.
1624	16 1/16	24 3/16	149	2—29 lbs.
1630	16 1/16	29 3/16	186	2—35 lbs.
1635	16 1/16	35 1/16	233	2—41 lbs.
2815 H.C.	28 1/16	15 1/16	116	2—25 lbs.
1415 Q.C.	14 1/16	15 1/16	56	2—15 lbs.
*1616 Roof	16	15 1/2	32	2—12 lbs.
Tri-Vent Louver Ventilators				
5–12	48 3/4	10 1/4	69	2—19 lbs.
6–12	43 1/4	11	69	2—18 lbs.
8–12	36 3/4	12 1/4	73	2—16 lbs.
10–12	35 1/8	14 3/4	86	2—17 lbs.

N.F.—made without flange for cement or cinder block construction.
*Also available with porcelain enamel finish.





Roof Ventilator
Patented

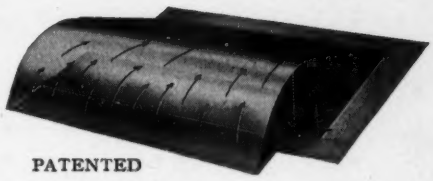
DONLEY VENTILATORS

Donley Roof Ventilators

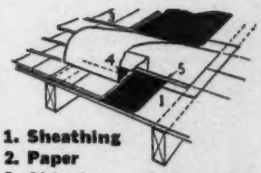
For hip roofs, where gable type cannot be used, this ventilator affords ventilation for the attic space. Overhanging top provides greater weather protection. This ventilator has a free area of 32 sq. in. for air passage yet stands out only 5½ in. from the roof surface.

It is designed for roofs with a 5/12 slope or greater and fits a roof opening 16 x 10 in. high. Ventilator is made of 20-gauge steel (except top which is 16-gauge), electrically welded and finished with high grade paint baked on. Complete with quality screening.

Also available with porcelain enamel finish for maximum corrosion resistance.



PATENTED



1. Sheathing
2. Paper
3. Shingles 4. Screening
5. Counter-flashing

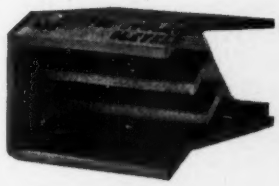
In installing, flanges of ventilator are nailed to the roof boards around the 16 x 10-in. opening. Roof paper and roof shingle cover the flanges on all sides, fitting under the counter flashing at the front edge.

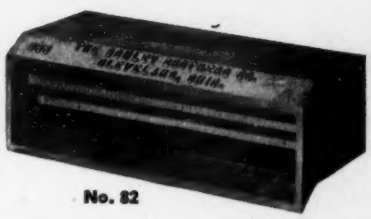
Donley Brick Ventilators

Designed to take the place of one, two or three bricks. There are two styles: (a) Louver, and (b) Bar.

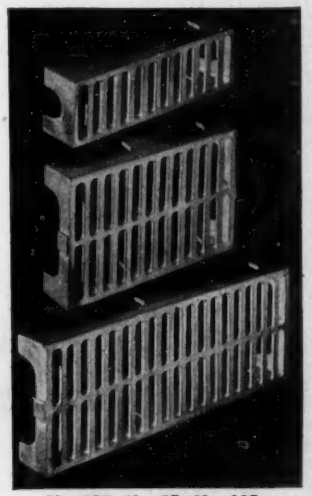
No. 82 Louver Type of cast aluminum, 8⅛ x 2¼ x 2¾ in. deep, exclusive of overhang. Two sloping baffles and a low one at rear keep out rain. Lip at front projects ¾ in. beyond face of masonry so that drippings do not strike area just beneath with the risk of spalling. Floor is sloped to assist drainage. Insect screen is placed at back. Free area is 8.6 sq. in.

No. 825, No. 85 and No. 125 Bar Type, sizes 8 x 2, 8 x 5 and 12 x 5 in. Available in cast iron or cast aluminum. Insect screen supplied at slight extra cost. Free area is: No. 825, 9 sq. in.; No. 85, 19 sq. in.; No. 125, 30 sq. in.





No. 82



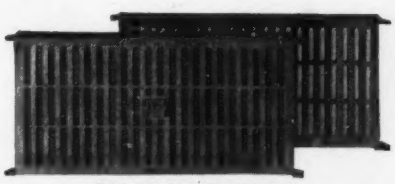
No. 825, No. 85, No. 125

Donley Foundation Ventilators

Donley Foundation Ventilators provide access of fresh air under porches, buildings without basement, vegetable rooms, soffit spaces, etc. Supplied with bronze or aluminum insect screen at extra cost.

Adjustable Ventilators

Donley Adjustable Foundation Ventilators have two plates, one of which is moved by means of a knob to close or open the ventilator. They have 30% open area. They are especially useful in vegetable rooms and to provide a controlled air intake into homes with airtight construction. They are made of cast iron with baked-on gray paint. Also made of cast aluminum. Made in three sizes: No. 86 — 8 x 5¾ in.; No. 112 — 12 x 7¾ in.; No. 116 — 16 x 7¾ in. Packed 6 to a carton. Bronze insect screen supplied at extra cost on cast iron and steel ventilators and aluminum screens on those made of aluminum, except when government regulations force substitutes.



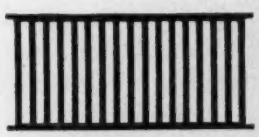
Adjustable Ventilator

Continuously Open Ventilators

These Donley Foundation Ventilators are made in two styles: bar type and diagonal grid, both of cast iron. Supplied with bronze or aluminum insect screen at extra cost.

Bar-Type Ventilators

Has vertical bars. Made in six sizes as shown in table below. Cast iron only.



Bar-Type Ventilator

Diagonal Grid Ventilators

Has 11/16-in. square openings. Made in six sizes as given in table. Nos. 23, 24 and 25 are also available in cast aluminum.

Diagonal Grid Ventilator

Bar Type		Diagonal Type		Weight per Doz.
No.	Size	No.	Size	
4	8″x 8″	23	8″x 8″	36 lbs.
5	12″x 8″	24	12″x 8″	52 lbs.
6	16″x 8″	25	16″x 8″	60 lbs.
9	12″x12″	28	12″x12″	118 lbs.
10	18″x12″	29	18″x12″	134 lbs.
11	24″x12″	30	24″x12″	178 lbs.

DONLEY COAL CHUTES—FOUNDATION and GRADE LINE

Highly durable, these chutes withstand the most battering service without defacement. The door when open for service is held upright by the formation of the hinges and protects wall of building from injury by flying fuel. Ears are provided in the sides for embedding in the mortar joint to give secure and permanent installation.

Automatic latch secures the door firmly when door is closed. No exposed locking device on which burglar can work. Donley Chutes have copper steel, rust-resisting body reinforced by steel angles. Automatic lock, released from inside only.

No.	Rough Wall Openings			Shipping Weight
	Wide	High	Deep	
19	24"	17"	8"	31 lbs.
612	32"	22"	12"	60 lbs.

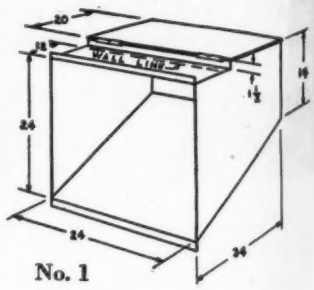
Foundation Chutes

Donley Foundation Coal Chutes are designed for installation in the foundation wall. They will protect the foundation of a home from the disfiguring scars and dirt of coal deliveries. The attractiveness of these chutes is indicated in the picture above.

Grade Line Chutes

Used where foundation wall is too low to receive foundation chute. Horizontal opening is set level with lawn or walk. Door opens against building, and protects it from flying fuel.

The automatic lock releases from inside only. Body is of 12-gauge rust-resisting Cor-ten steel, welded at the corners; hinges of steel with brass hinge pins. Checkered steel, non-slip door overhangs body to shed water, and supports sidewalk traffic.



No. 1

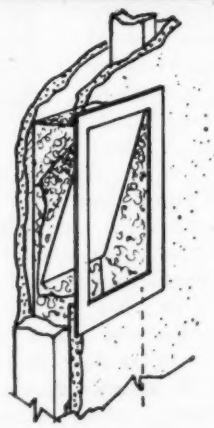
DONLEY LAUNDRY CHUTE DOORS

These doors are hinged at the top, opening inward and self-closing. Just push the soiled linen through the opening; the soiled clothes drop to the laundry room and the door closes. It is not necessary to have one hand free to open the door and there is no possibility of leaving it open.

Because the door is always closed there is no danger of an up-draft drawing a fire up the laundry chute from the basement. Donley Laundry Chute Doors meet the requirements of building codes which require a self-closing door.

The door is inconspicuous, projecting only ¼ in. beyond the face of the plaster. There is no projecting knob or hinge. The door and frame are a complete unit which is easily installed with concealed nailing. On the inside of the frame is a wide inward flange which fastens neatly and quickly to the chute and eliminates sharp edges which might catch the clothes and prevents snagging or tearing.

Donley Laundry Chute Doors are made in two sizes as shown in the table. Regularly supplied with white-enamel, baked-on finish. They are sturdy, trouble-free and make the perfect opening to the chute.



Order by No.	Wall Opening		Door Opening		Overall Size		Shipping Weight
	Width	Height	Width	Height	Width	Height	
1	9"	12"	8⅛"	11"	11"	13¾"	6 lbs.
2	8"	11"	7"	10"	9"	12"	5 lbs.

Section 4

Windows, Doors and Millwork

MILLWORK is an important item, as it may constitute as much as, or more than a third of the material that is sold by the dealer on the average house job.

In the early days of our history the entire house was built by hand on the building site. Today the forming of lumber used in house construction has been turned over to the mill with its array of power tools. Doors, windows, mouldings, parts for stair work, cabinets, etc., are all factory made. There is a definite trend toward the prefabrication of units of construction as is evidenced by the complete window unit.

In selling millwork, measurement for sizes is very important, as extra care must be exercised to insure their correctness. Doors, windows, frames, cabinets, etc., have to fit "openings." The location of a sash or door, for example, in the exterior or partition walls is known as an "opening." Before the frame is placed it is known as a "rough opening." After the frame is placed, there remains a "sash opening" or a "door opening." This conforms to the "outside measurement" of the sash or door. When sash are fitted and doors hung, the opening is complete except for the application of the interior trim.

In measurements, the width is always given first, the length or height second, and the thickness third. Even when stock sizes are used, the opening size should also be given to double check the correctness of the figures. Too much emphasis cannot be placed on the accuracy and correctness of measurements.

Stock Millwork—Manufacturers' associated groups have established and standardized certain definite sizes and stock patterns of doors and windows, etc. Every effort should be made to use, as far as possible, stock sizes, patterns and designs on all millwork items. Service on stock millwork is much quicker and better, the cost is less, measurements cause less trouble, standardization makes replacements easier and the investment in inventory is less.

Millwork manufacturers, in order to make stock sizes go further in meeting requirements of the trade, have also standardized certain so-called "extras" which can be applied to stock items such as doors and windows to make them fit unusual needs.

Windows

Windows serve three basic purposes in homes: admit light, aid in ventilation, provide decoration or appearance. To accomplish these purposes, it is necessary to furnish many different kinds of sash and windows because of the variation in types of materials which are used in the construction of a house.

The double-hung window has an upper and lower sash which slide vertically. The sash are counter-balanced by weights hung on sash cord or chain, or by a sash balance.

A second type is a casement window, technically known as a casement sash. Wood casement windows are hinged to swing in or out.

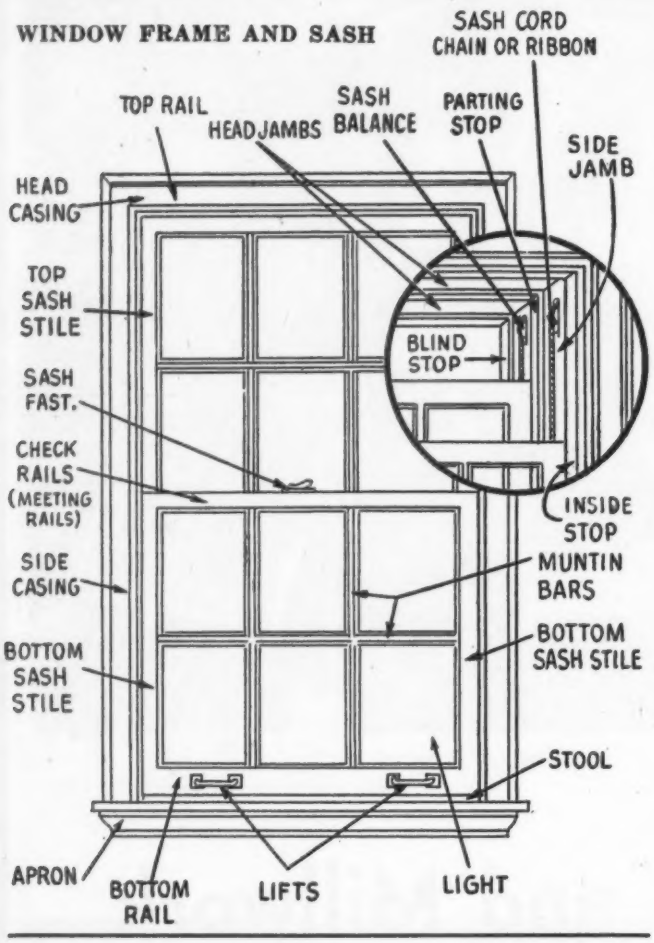
A third type is the window which does not open and is called a stationary or fixed sash.

A fourth category would include sash for special uses, such as transom sash, cellar sash, storm sash, barn and utility sash.

The term "sash" always means a single unit which may open in or out, be stationary, be hinged at the bottom, slide horizontally or vertically, or be one of the two parts of a double hung window, that is, an upper sash or a lower sash.

The term "window", when applied to those made of wood, is used only for the double-hung type. If the window is made of metal then the word "window" means the metal frame and the metal sash all assembled in one unit.

Sash used in residential construction are usually 1⅜" thick. In large commercial and public buildings they are



usually specified 1¾" thick. Storm sash and barn or utility sash are 1⅛" thick.

Sash are furnished either "open" or "glazed." When the glass is installed in the sash, it is "glazed." Ordinarily single strength glass is supplied. Therefore, if double strength or a special type of glass is specified, be sure to enter it on the order.

It is customary to specify the size of sash by the size of the glass required to glaze it, and the thickness of the sash frame in which the glass is placed. The width is always given first, the height second, and the thickness of the sash third. For example, 1 sash 24 x 24—1 light 1⅜" glazed. Glass sizes are always given in inches. Because the manufacture of sash and windows is standardized, the outside measurements can be computed. For example, a window 24 x 24—1⅜" 2 light (lt.) means that there are two lights of glass 24" high—48" of glass to which is added 6" of wood rails (3" bottom rail plus 1" of meeting rail plus 2" of top rail) for a total of 54". The width would be 24" of glass plus 4" of side rail (2" for each side rail) or a total width of 28". So for a 2-light window always add to the glass size 4" in width and 6" in height. For a 1-light sash 4" is added for width and 5" for height.

There are two different types of double-hung windows—check rail and plain rail. However, since plain rail windows have been outmoded by pre-fit weatherstripped windows, they need no further explanation here.

According to the type of architecture a house typifies, the panes of glass in a window or sash may be "cut-up" or "divided" into smaller panes. This is done by the use of muntin bars.

Windows, so divided, are ordered by the glass size with the number of "cut-ups" specified, such as top sash divided 3 light, or bottom and top sash divided 2 wide and 2 high.

The various parts of a window, its frame, and the mouldings to "trim" it are illustrated in the drawing below.

Popular stock sizes and designs of windows, casement sash, cellar sash and barn are illustrated on the following page.

Sometimes in residence construction and more often in porch enclosures, casement sash are preferred. Although casement sash may be hinged to swing either in or out, more often they are swung out, as it is very hard to weatherproof a casement which swings in.

Also illustrated are cellar sash and barn sash. Cellar sash are the sash for the basement walls of a residence. Barn sash are used in barns, shed, garages and utility buildings. A storm sash is an extra sash that is placed on the outside of an existing window to reduce the amount of cold air leaking into a house. They are fuel savers which pay for themselves in a short time. In addition they reduce the amount of soot and dirt entering a house, reduce condensation of moisture and formation of frost on glass surfaces, and reduce drafts.

UNIT TYPE WINDOWS

Unit type windows are manufactured of steel, aluminum, and wood. They are supplied complete, usually without glazing, ready for installation in the rough opening of frame or masonry construction. They are made in a full range of popular sizes and styles.

Residential Casement: Units of various styles and sizes are available in both metal and wood, and swung from both right and left jamb.

Designed for frame or masonry homes, casements are supplied both with and without mechanical actuators. Details of a typical installation are illustrated on the next page.

Double Hung: Steel, aluminum, and wood units, some complete even to storm sash and screens, including frame, surrounds, and casing. They are made in standard sizes to fit all popular openings.

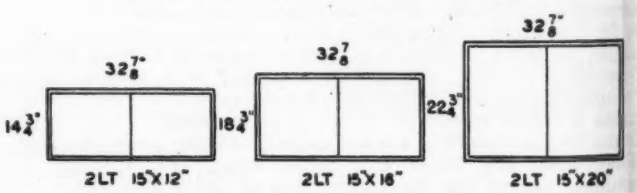
Picture Windows: These are stationary units, usually a large expanse of glass area, either single or double glazed. They may be flanked by narrow casements or double-hung, although the latter type is usually not included as a unit-type assembly. Picture windows are made of aluminum, steel, and wood in an ample range of sizes and styles.

Basement and Utility Windows: These windows are supplied in units for installation in a standard masonry wall. The basement window usually consists of a single sash, pivoted at the bottom, with a retaining arm that stops the sash in one or more open positions.

The steel utility window is a stationary or fixed unit with a superimposed ventilator on the inside. All lights are glazed except those in front of the ventilator, leaving muntins in that part of the fixed unit as a protective grill.

METAL BASEMENT WINDOWS

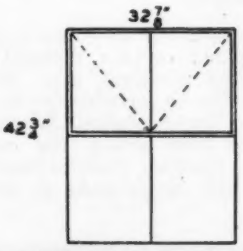
Sizes Recommended by the Metal Window Institute



ALL UNITS SHOWN ARE WAREHOUSE TYPES AND SIZES.

METAL UTILITY WINDOWS

Sizes Recommended by the Metal Window Institute



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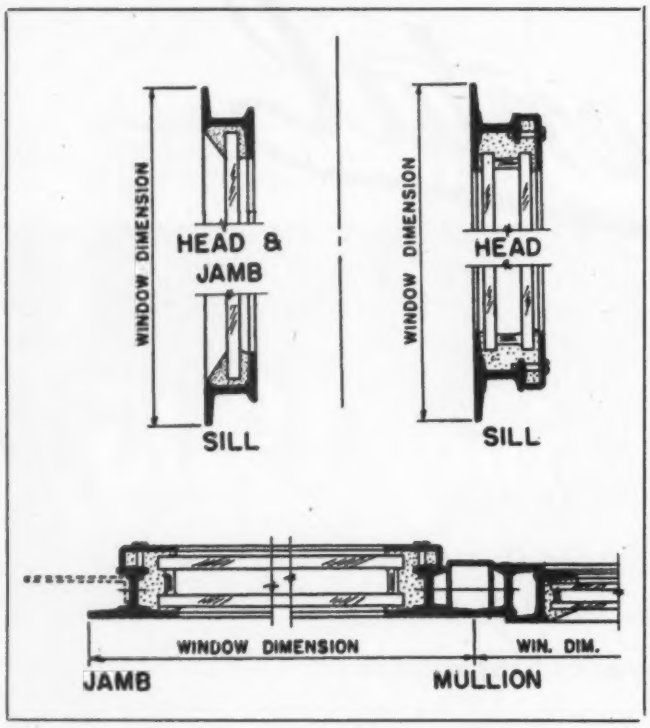
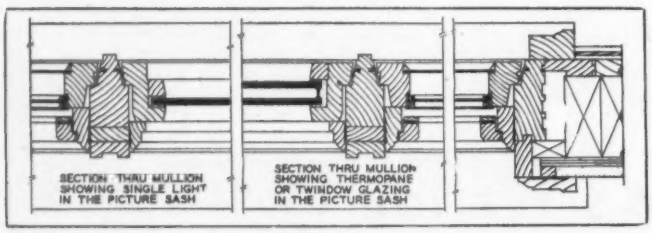
METAL UNIT PICTURE WINDOW INSTALLATION



WOOD UNIT PICTURE WINDOW INSTALLATION


SECTION THRU MULLION SHOWING SINGLE LIGHT IN THE PICTURE SASH
SECTION THRU MULLION SHOWING THERMOPANE OR TWINDOW GLAZING IN THE PICTURE SASH

Projected Windows: The sash in projected windows pivot on a horizontal axis. They are actuated by mechanical arrangements manually, and are most commonly manufactured of rolled steel, aluminum, and wood. The metal types are widely used in industrial and commercial buildings. The wood types are generally designed for residence use.

The projected principle has been expanded to include windows that have a series of horizontally pivoted sash in the same frame, instead of one or two. These are also commonly known as awning type windows. When in the open position they permit maximum ventilation, and at the same time reduce the penetration of heat.

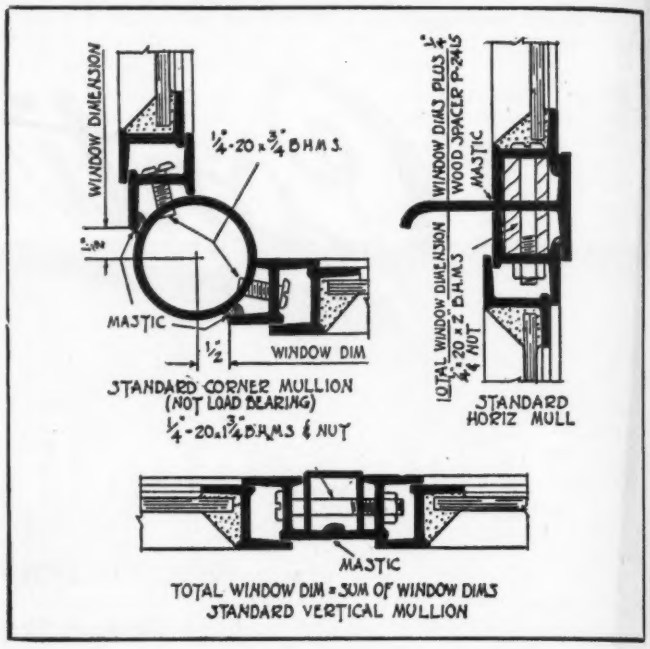
A third type of projected window is known as the architectural type. These are used in commercial or industrial buildings, but are more finished and of higher quality.

Jalousie Windows: Jalousie windows and doors, or awning type windows and doors as they are sometimes called, consist of a series of glass panes, horizontally pivoted like a louvre. The louvred section is controlled open and shut by means of a casement type operator.

They are manufactured of both metal and wood, and have proved particularly popular in sections of the country and in types of structures where maximum ventilation is important. Equipped with screens and storm sash, the units are highly efficient in any climate. These are installed and removed from the inside.

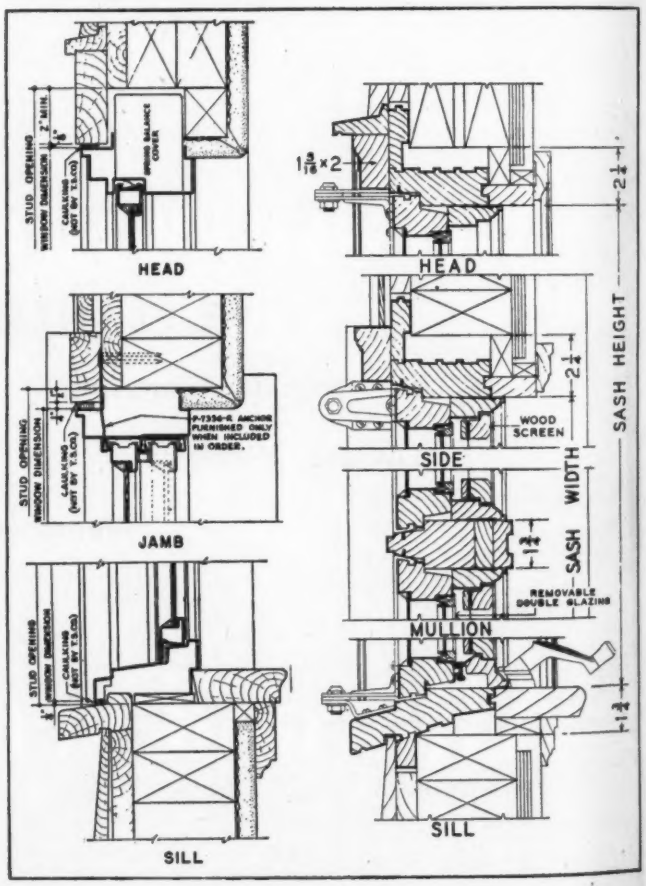
Both jalousie windows and doors are supplied in a wide range of standard sizes.

TYPICAL CASEMENT WINDOW INSTALLATION



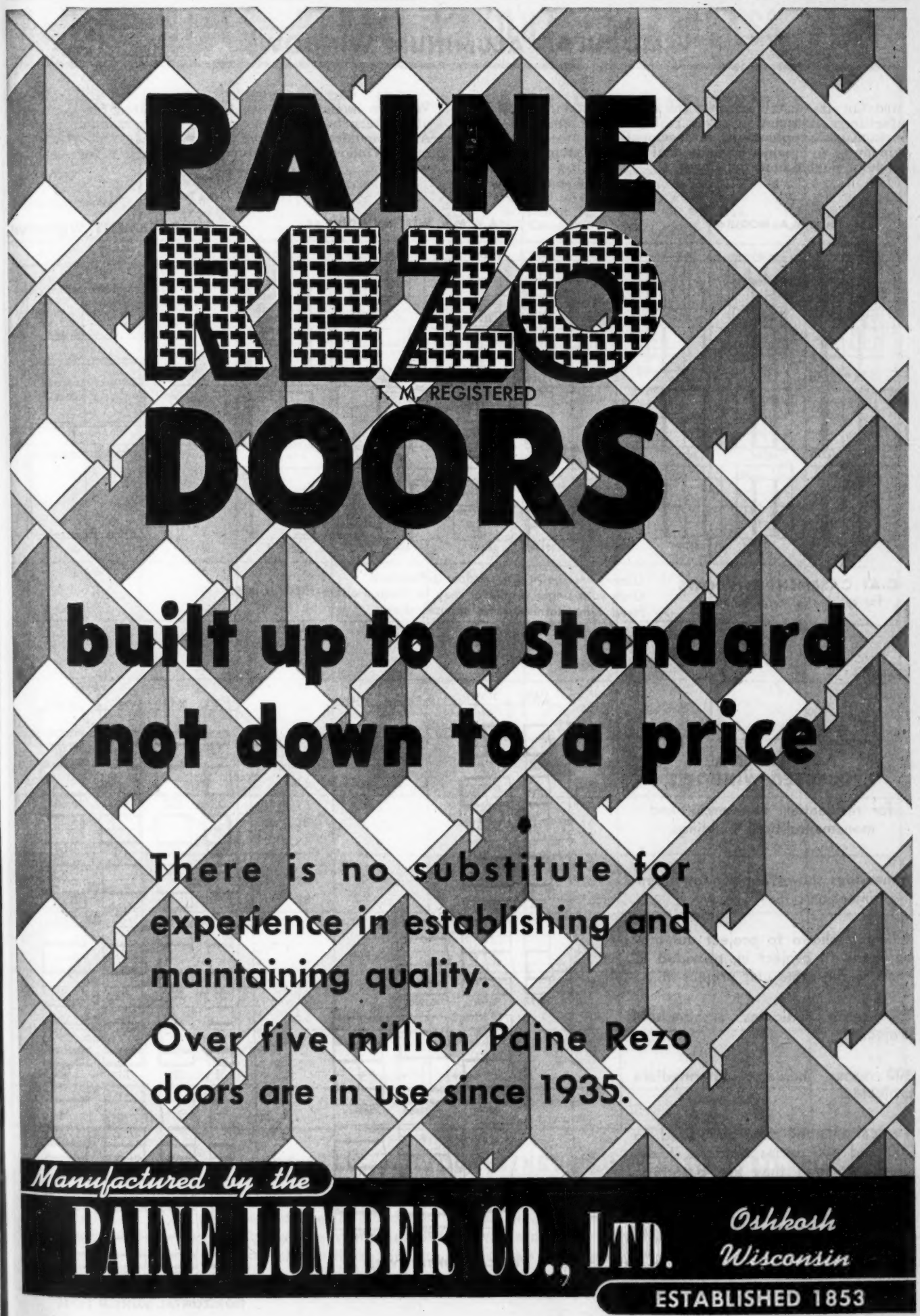
TYPICAL DOUBLE-HUNG METAL INSTALLATION

TYPICAL DOUBLE-HUNG WOOD INSTALLATION



Detention Type Windows: These are the same as casement or projected windows, except that a metal grid or grill is incorporated over the opening to prevent traffic through it. They are also known as Security windows, and are used in prisons and asylums, or in other structures where illegal entry or exit must be prevented.

Both the casement and pivoted sash are designed to swing inward, because the grill or bars prevent their being opened outward.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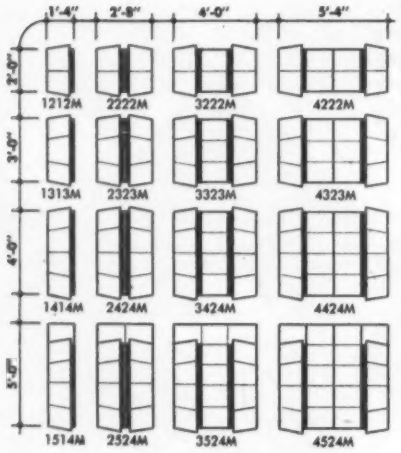
MODULAR ALUMINUM WINDOWS

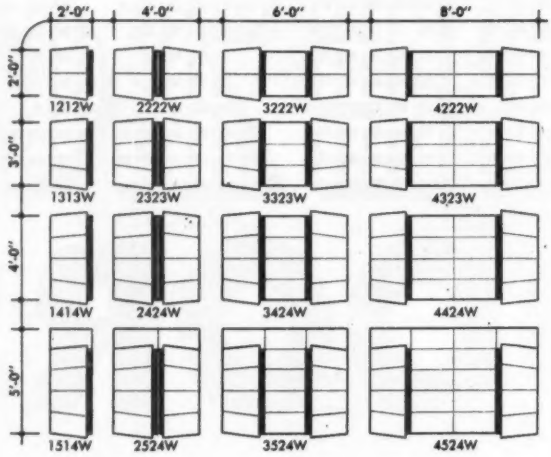
Modular sizes established by the Aluminum Window Manufacturers Association cover residential, commercial and monumental applications in casement and projected type windows. A number of individual AWMA members offer modular double-hung windows.

Western modular sizes have been created for the benefit of western builders who prefer larger modular units. Also, modular sizes have been established by the Aluminum Window Manufacturers Association for basement windows.

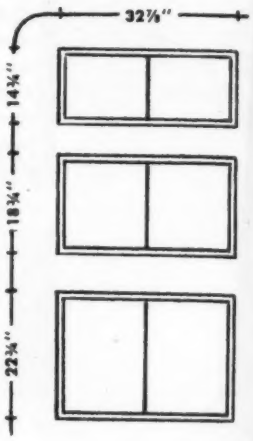
A.W.M.A. MODULAR



A.W.M.A. WESTERN MODULAR



BASEMENT WINDOWS



C-A1 CASEMENT WINDOWS
for residential type buildings.

Dimensions shown are window dimensions.
Units with single ventilator may be hinged either right or left.
Fixed types furnished for all sizes shown.

P-A1 and P-A2 PROJECTED WINDOWS

for residential, commercial and monumental-type buildings.

Dimensions shown are window opening dimensions.

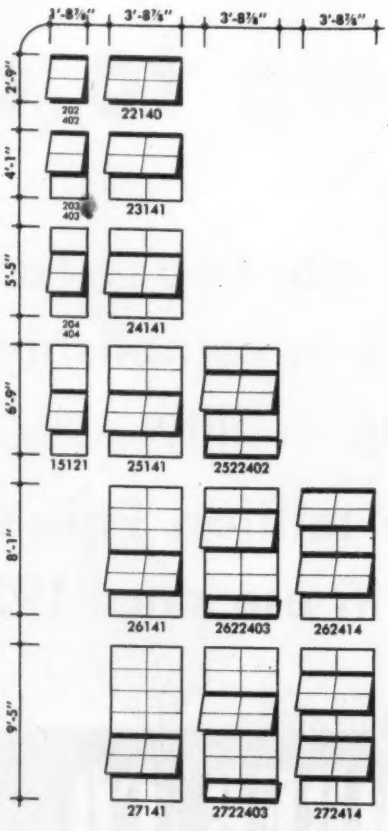
All vents shown to project out may be made to project in, provided all vents in the same unit project in.

200 series indicates architectural projected.

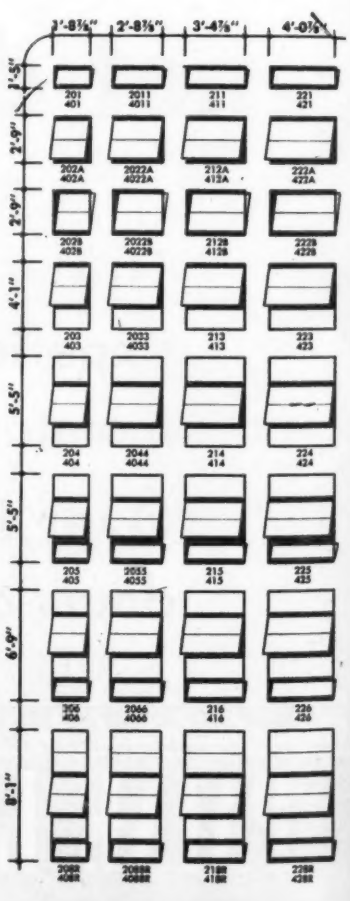
400 series indicates intermediate projected.

Vertical muntins may be added to 200 and 400 series windows if desired, provided they are based on 20" or 24" bar centers.

Fixed types for all sizes shown.



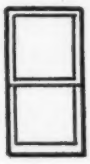
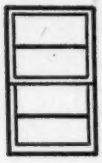
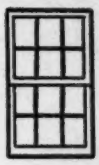
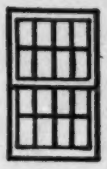
VERTICAL MUNTIN TYPES



HORIZONTAL MUNTIN TYPES

OPENING SIZES—PREFIT LAYOUTS and GLASS SIZES

CHECK RAIL WINDOWS 1⅜"—POPULAR SIZES and DESIGNS

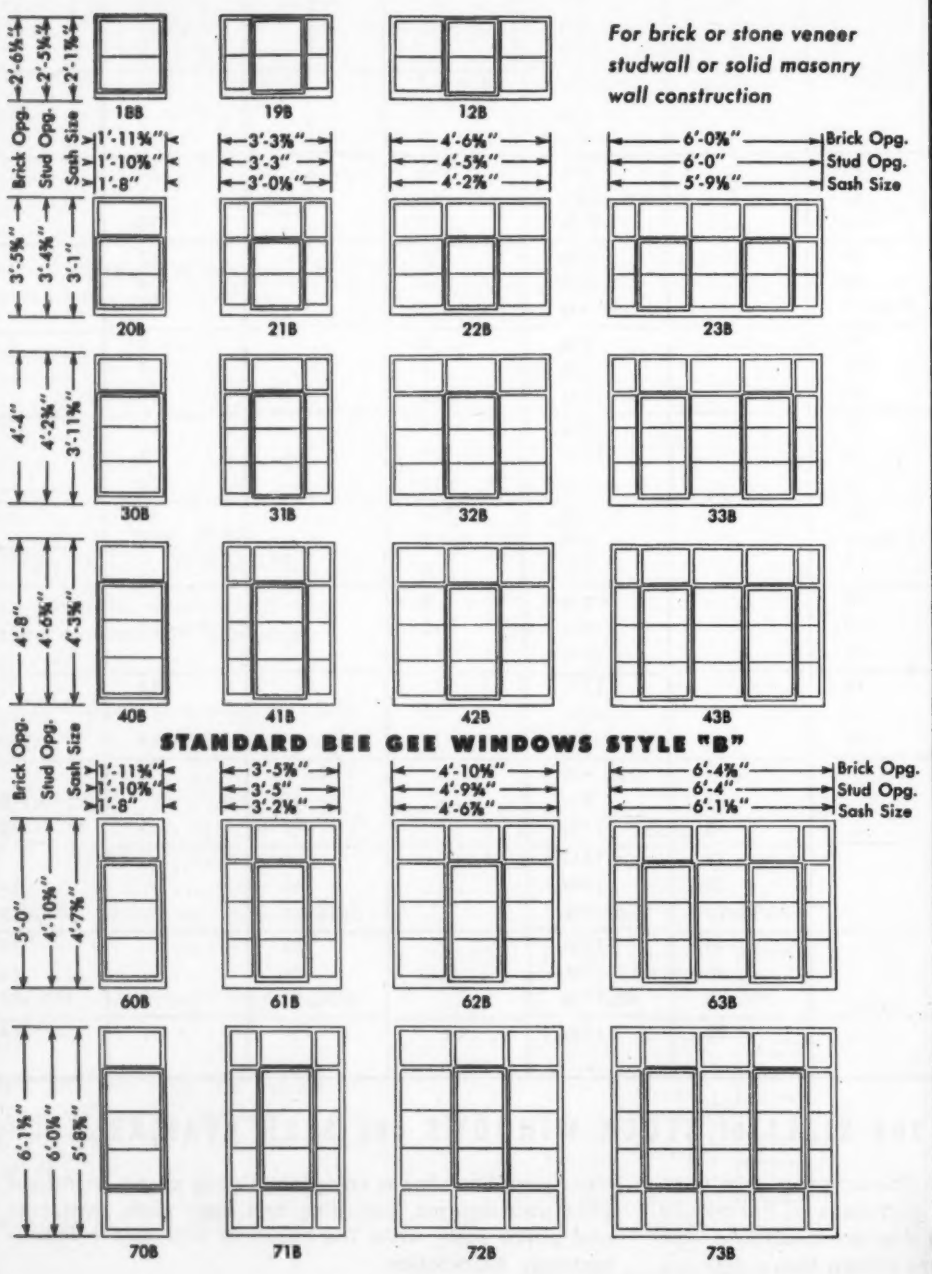
Prefit Face Measurements	Stiles 1 29/32" · Top Rail 1 29/32" · Bottom Rail 3" · Vertical Bar ⅜" · Horizontal Bar ⅞" · Check Rail 1 3/32"				Stiles 1 29/32" · Top Rail 1 21/32" · Bottom Rail 3" · Vertical Bar ⅜" · Muntin ⅜" · Check Rail 1 3/32"		St. 1 21/32" · T.R. 1 21/32" · B.R. 2 ¾" · V.B. ⅜" · Mun. ⅜" · C.R. 1 3/32"	St. 1 29/32" · T.R. 1 21/32" · B.R. 2 ¾" · V.B. ⅜" · Mun. ⅜" · C.R. 1 3/32"
Windows are made ⅛" narrower and 1/16" shorter than window opening sizes shown below	 2 Lt.	Top 3 Lt. W.	Top 4 Lt. W.	 4 Lt. H.	Top 6 Lt.	Top 8 Lt.	 12 Lt.	 16 Lt.
1-8x3- 2	16x16	.....	.....	16x 7¾	.....	.....	.....	.....
3-10	20	.....	.....	9¾	.....	.....	.....	.....
4- 6	24	.....	.....	11¾	.....	.....	.....	.....
2-0x2-10	20x14	6 ½x14	.....	20x6¾	6 ½x 7	.....	.....	.....
3- 2	16	16	.....	7¾	8	.....	6 21/32x 8	.....
3- 6	18	18	.....	8¾	9	.....	9	.....
3-10	20	20	.....	9¾	10	.....	10	.....
4- 2	22	22	.....	10¾	11	.....	11	.....
4- 6	24	24	.....	11¾	12	.....	12	.....
4-10	26	26	.....	12¾	13	.....	13	.....
5- 2	28	28	.....	13¾	14	.....	14	.....
2-4x2-10	24x14	7 27/32x14	.....	24x 6¾	7 27/32x 7	.....	.....	.....
3- 2	16	16	.....	7¾	8	.....	8x 8	.....
3- 6	18	18	.....	8¾	9	.....	9	.....
3-10	20	20	.....	9¾	10	.....	10	.....
4- 2	22	22	.....	10¾	11	.....	11	.....
4- 6	24	24	.....	11¾	12	.....	12	.....
4-10	26	26	.....	12¾	13	.....	13	.....
5- 2	28	28	.....	13¾	14	.....	14	.....
2-8x2-10	28x14	9 5/32x14	.....	28x 6¾	9 5/32x 7	.....	.....	.....
3- 2	16	16	.....	7¾	8	.....	.....	.....
3- 6	18	18	.....	8¾	9	.....	.....	.....
3-10	20	20	.....	9¾	10	.....	9 11/32x10	.....
4- 2	22	22	.....	10¾	11	.....	.....	.....
4- 6	24	24	.....	11¾	12	.....	12	.....
4-10	26	26	.....	12¾	13	.....	13	.....
5- 2	28	28	.....	13¾	14	.....	14	.....
3-0x2-10	32x14	.....	7 13/16x14	32x 6¾	.....	7 13/16x 7	.....	.....
3-10	20	.....	20	9¾	.....	10	.....	7 13/16x10
4- 6	24	.....	24	11¾	.....	12	.....	12
4-10	26	.....	26	12¾	.....	13	.....	.....
5- 2	28	.....	28	13¾	.....	14	.....	14
3-4x4- 6	36x24	.....	8 13/16x24	36x11¾	.....	8 13/16x12	.....	8 13/16x12
4-10	26	.....	26	12¾	.....	13	.....	13
5- 2	28	.....	28	13¾	.....	14	.....	14
3-8x4- 6	40x24	.....	9 13/16x24	40x11¾	.....	9 13/16x12	.....	9 13/16x12
5- 2	28	.....	28	13¾	.....	14	.....	14

OTHER DESIGNS and SIZES of STOCK WINDOWS and SASH AVAILABLE

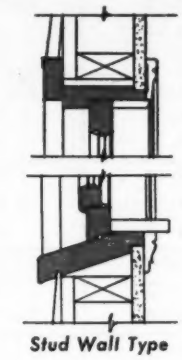
No attempt has been made in this catalogue to illustrate or list all of the designs and sizes of Ponderosa Pine Stock Windows and Sash that are available. On this and the following page are shown those that are most popular. For a complete listing of all standard sizes and designs, including one light sash, transoms and porch sash, write The National Woodwork Manufacturers Association.

BEE GEE MODERN WOOD WINDOWS

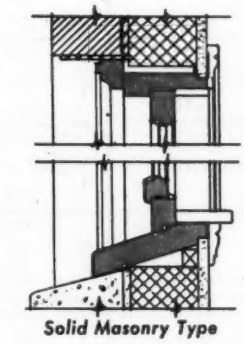
BEE GEE Modern All-Wood Windows are finding more and more favor with customers everywhere. They're light and airy... with the styling particular people want. The modern BEE GEE Window is a complete unit consisting of FRAME, pre-fit glazed SASH with the glass bedded in putty, a bronze SCREEN and all HARDWARE installed at the factory. The more than 42 styles and sizes are shipped ready to set in the wall.



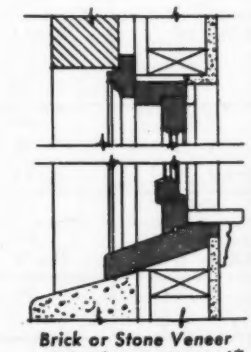
FRAME DETAILS



Stud Wall Type



Solid Masonry Type



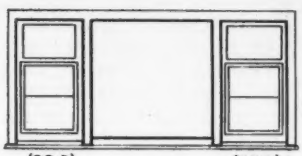
*Brick or Stone Veneer with Plaster Reveal**

**Plaster Reveal available also in Stud Wall and Solid Masonry Frames.*

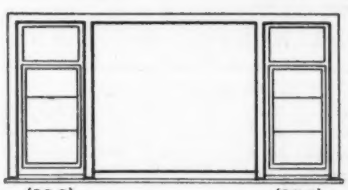
QUICK DELIVERY—STEADY PROFITS

Increased production assures 5 to 10 day delivery on every style and size of Bee Gee Window! Cash in on proved Bee Gee sales appeal—housewives appreciate the "Clean the Outside from the Inside" feature.

On request the 20 sizes of Bee Gee Picture Windows can be shipped completely glazed with either Thermopane or Twindow.



(20-B) (20-B)



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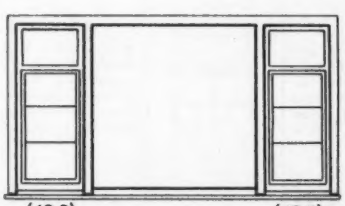

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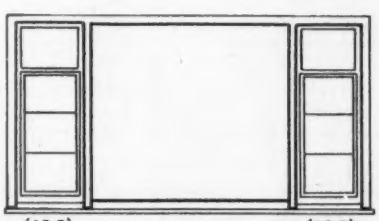
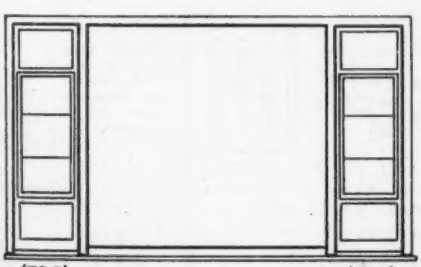


(60-B) (60-B)



(70-B) (70-B)

Mail coupon for catalog showing complete picture window sizes.

HOW TO ORDER BEE GEE WINDOWS

1. State the quantity needed, the unit number, and the type of frame construction desired, such as "Studwall, Solid Masonry, or Brick Veneer."

2. If narrow jambs are needed for Plaster Reveal, just state "Plaster Reveal" with your frame construction.

3. Standard jambs are 1⅜" x 5⅛". Narrow jambs down to 3⅛" wide are available for Plaster Reveal on inside, or where wall construction necessitates less than 5⅛" wide, without extra cost.

4. Clear glass always shipped unless "Obscure" is specified.

5. When marble stools of more than ¾" thickness are to be used, it is only necessary to specify "For Marble Stools" and a frame for this type of stool will be furnished at no extra cost.

6. Frames for bay windows or corner windows with extended sills for mitering will be furnished if requirements are specified on order, at a slightly higher price.

7. Frames for all sizes are available for Studwall, Brick, or Stone Veneer, and for Solid Masonry Walls.

SOLD BY YOUR LUMBER DEALER

Write today for the complete BEE-GEE Window details and Catalog.

BROWN-GRAVES CO., Dept. AL-103
Akron 1, Ohio

NAME _____

ADDRESS _____

CITY _____ **STATE** _____

BROWN-GRAVES CO.
Akron 1, Ohio

OPENING SIZES—PREFIT LAYOUTS and GLASS SIZES

POPULAR SIZES and DESIGNS

CASEMENT SASH 1⅜"

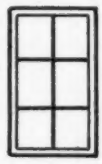
Prefit Face Measurements — Stiles . . . . . 1 21/32" Bottom Rail . . . . . 3" Top Rail . . . . . 1 29/32" Vertical Bar . . . . . 3/16" Muntin . . . . . 3/16"

Sash are made ⅛" narrower and 1/32" shorter than opening sizes given below

1 Lt.

3 Lt. H.

4 Lt. H.



6 Lt. 2 W.

8 Lt. 2 W.

	1 Lt.	3 Lt. H.	4 Lt. H.	6 Lt. 2 W.	8 Lt. 2 W.
1-3½x3- 2	12x33	12x10 13/16	.....	5 7/8x10 13/16	.....
3-10	41	13 ½	12x10 1/16	13 ½	5 7/8x10 1/16
4- 6	49	.....	12 1/16	.....	12 1/16
1-7½x3- 2	16x33	16x10 13/16	.....	7 7/8x10 13/16	.....
3-10	41	13½	16x10 1/16	13 ½	7 7/8x10 1/16
4- 6	49	.....	12 1/16	.....	12 1/16

STORM SASH and SCREENS 1⅛"

Prefit Face Measurements

Storm Sash	Screens
St. . . . . 1 29/32"	St. . . . . 1 27/32"
T.R. . . . 1 29/32"	T.R. . . . 1 27/32"
B.R. . . . 4 1/16"	B.R. . . . 3"
C.R. . . . . 7/8"	C.R. . . . . 5/8"

Storm Sash or Screens

Storm Sash and Screens are available for all Standard Windows. The more popular sizes conform to the window sizes shown on the preceding page.

Storm Sash and Screens are made ⅛" narrower and 1" longer than window opening sizes.

CELLAR SASH 1⅛" and 1⅜"

Prefit Face Measurements — St. . . . . 1 21/32" T.R. . . . . 1 29/32" B.R. . . . . 1 29/32" V.B. . . . . 7/16"

Sash are made ⅛" narrower and ⅛" shorter than opening sizes given below

2 Lt.

2-0x1-4	10x12
2-4x1-4	12x12
1-8	16
2-0	20
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

Prefit Face Measurements — St. . . . . 1 21/32" T.R. . . . . 1 29/32" B.R. . . . . 1 29/32" V.B. . . . . 3/16"

Sash are made ⅛" narrower and ⅛" shorter than opening sizes given below

3 Lt.

2-4x1-4	8 x12
2-8x1-0	9 11/32x 8
1-4	12
1-8	16
3-0x1-4	10 21/32x12
1-8	16
3-4x1-8	12 x16
.....	.....
.....	.....

Prefit Face Measurements — St. . . . . 1 29/32" T.R. . . . . 1 29/32" B.R. . . . . 1 29/32" V.B. . . . . 3/16"

Sash are made ⅛" narrower and ⅛" shorter than opening sizes given below

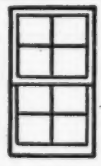
4 Lt.

3-8x1-4	9 13/16x12
1-8	16
4-4x1-4	11 13/16x12
1-8	16
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

PLAIN RAIL WINDOWS 1⅛"

Prefit Face Measurements — St. . . . . 1 21/32" T.R. . . . . 2 3/16" B.R. . . . . 2 3/16" M.R. . . . . 1 5/32" V.B. . . . . 15/16" Mun. . . . 3/16"

Windows are made ⅛" narrower and 1/16" shorter than opening sizes shown below



8 Lt.

1-8½x3-10	8x10
2-0½x4- 6	10x12
2-4½x5- 2	12x14
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

Prefit Face Measurements — St. . . . . 1 21/32" T.R. . . . . 2 3/16" B.R. . . . . 2 3/16" M.R. . . . . 1 5/32" V.B. . . . . 3/16" Mun. . . . 3/16"

Windows are made ⅛" narrower and 1/16" shorter than opening sizes shown below

12 Lt.

2-4x3-10	8x10
4- 6	12
2-7x4- 6	9x12
.....	.....
2-10x4-6	10x12
3-4x5- 2	12x14

BARN or UTILITY SASH 1⅛" and 1⅜"

Prefit Face Measurements—Stiles . . . . 1 21/32" Top Rail . . . . 1 21/32" Bottom Rail . . . . 3" *Vertical Bar . . 3/16" or 7/16" Muntin . . . . 3/16"

Sash are made ⅛" narrower and 1/32" shorter than opening sizes given below

4 Lt.

1-8x2-1	8x10
2-5	12
2-0x2-1	10x10
2-5	12
2-9	14
3-1	16
2-4x2-5	12x12
2-9	14
3-1	16

Sash are made ⅛" narrower and 1/32" shorter than opening sizes given below

6 Lt. 2 W.

1-8x2-11¼	8x10
2-0x3- 5¼	10x12
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

Sash are made ⅛" narrower and 1/32" shorter than opening sizes given below

6 Lt. 3 W.

2-1x1-11	7x 9
2-4x2- 1	8x10
2- 5	12
2-7x2- 5	9x12
2- 9	14
2-10x2- 5	10x12
3-4x2- 5	12x12
.....	.....
.....	.....
.....	.....

Sash are made ⅛" narrower and 1/32" shorter than opening sizes given below

9 Lt. 3 W.

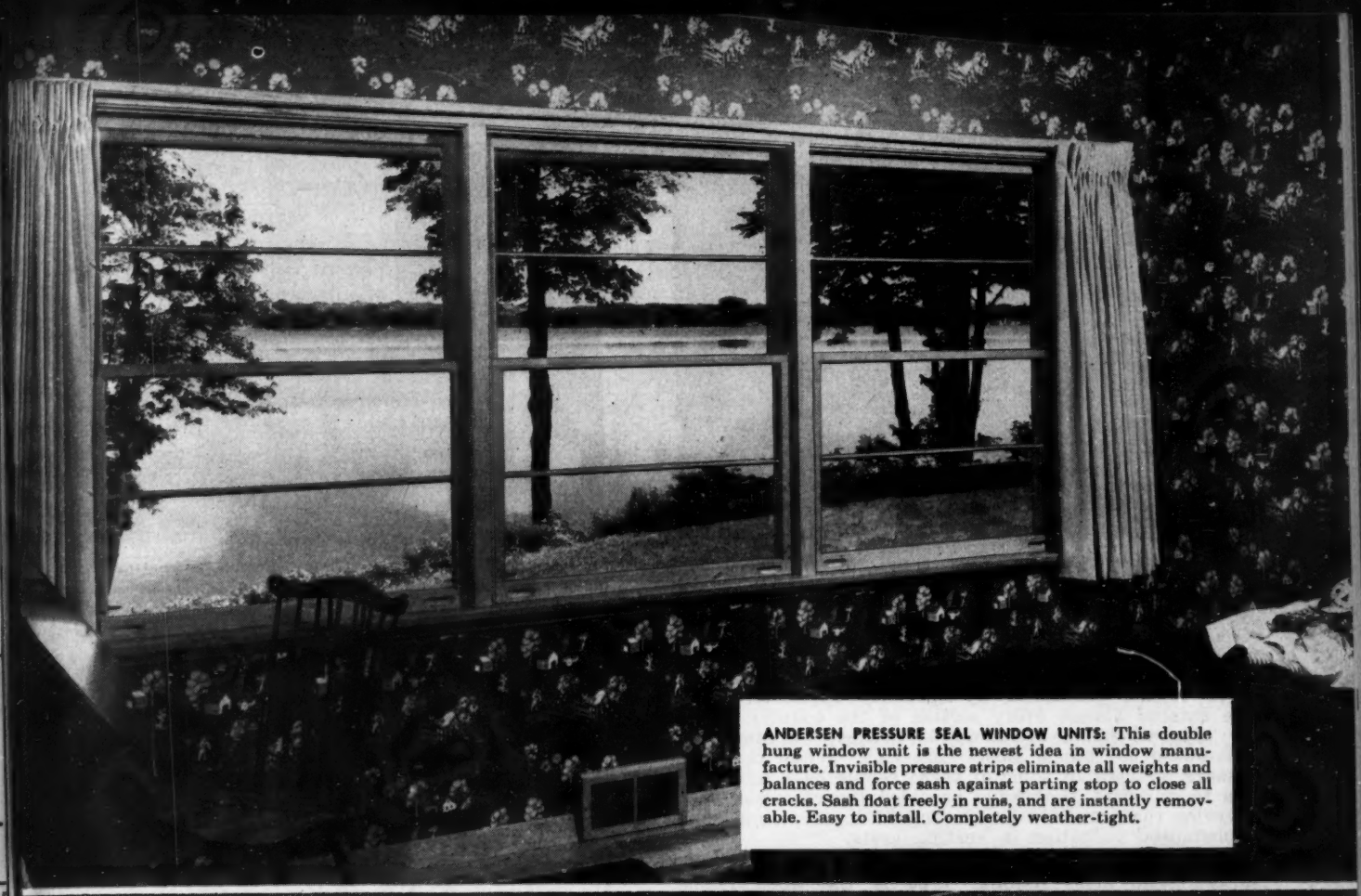
2-0x2- 8¼	6 21/32x 9
2-4x2-11¼	8 x10
3- 5¼	12
2-8x3- 5¼	9 11/32x12
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

*Vertical bar 7/16" for Sash 2 lights wide; 3/16" for Sash 3 lights wide.

Sash are made ⅛" narrower and 1/32" shorter than opening sizes given below

12 Lt. 3 W.

2-4x3-9½	8 x10
2-8x4-5½	9 11/32x12
3-0x4-5½	10 21/32x12
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....



ANDERSEN PRESSURE SEAL WINDOW UNITS: This double hung window unit is the newest idea in window manufacture. Invisible pressure strips eliminate all weights and balances and force sash against parting stop to close all cracks. Sash float freely in runs, and are instantly removable. Easy to install. Completely weather-tight.

ANDERSEN CASEMENT WINDOW UNITS: Wide variety of sizes, including picture window combinations. Outswinging sash. Comes complete with hardware, weatherstripping, and inside screen and double glazing. One-light, horizontal or cut-up glazing.

NEW! WIDER SASH

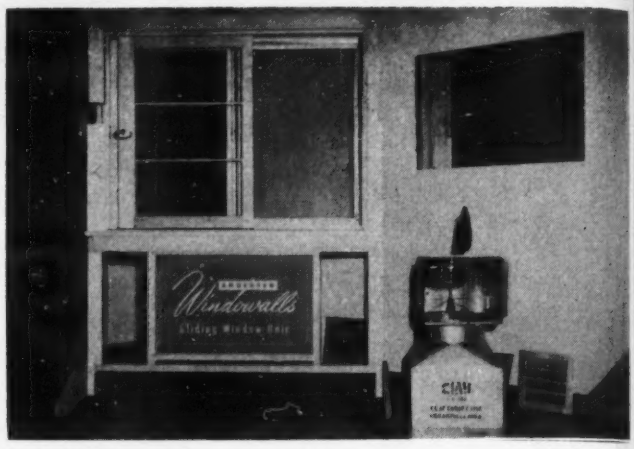
ANDERSEN CASEMENTS are now available in *two* sash widths, 18 inches and 22½ inches. The illustration above shows the 18 inch sash.

ANDERSEN *Windowalls** WINDOWALLS are complete window units . . . precision manufactured from beautiful, *insulating* wood.

*TRADEMARK OF ANDERSEN CORPORATION

Andersen Corporation • Window Specialists • Bayport, Minnesota

JALOUSIE or Venetian windows, as they are sometimes called, afford maximum ventilation, unobstructed vision, instantaneous control, and pleasing horizontal lines that blend into modern architectural design.



THIS SLIDING window unit display permits demonstration of the features that have made it a popular type in present day construction. The sash moves sideways on an ingenious track, and can be removed completely when desired.

STORM SASH

Due to the promotion by specialty applicators that have entered almost every section of the country where this type of home accessory is needed, the american home-owner is "storm sash" conscious. While the high pressure methods of some of these people have left them open to criticism, they have provided the customer with a service that can add home comfort in the winter and a substantial reduction in heating costs.

There are many types of storm sash available on the market. The most familiar type is the wood frame type that is hung in the fall and replaced with screens in the spring.

While many home owners prefer this type because it blends harmoniously with the style of a frame house, others have been enthusiastic over the combination storm window and screen units that have recently been introduced. These are permanent installations and can be changed from screen to storm window in a moment.

Combination windows are supplied in both metal and wood, the former being quite popular because of less bulk, lightness, and freedom from maintenance.

Most building material dealers have stocked storm sash for many years but few engaged in any intensive sales programs until specialty applicators began making serious inroads on their business. Those who have entered the field on this basis have soon found that it is truly a package sale item, sold installed, with provision made in the majority of cases for time payment.

In many ways, the building products dealer is the logical source of supply for storm sash. Almost without exception his is the better established business; he is in a position to give more expert advice, and what is more important to the customer, to stand behind the product and workmanship so that a satisfactory job is assured.

Doors

Exterior Doors—Because all outside doors are subject to the weather, they should be made from woods that will stand up and will take stain and varnish well. For that reason, solid doors of pine for paint and solid doors of oak for stain are preferred. Even then, all edges of the door, bottom, top and sides, should be painted or varnished to prevent swelling.

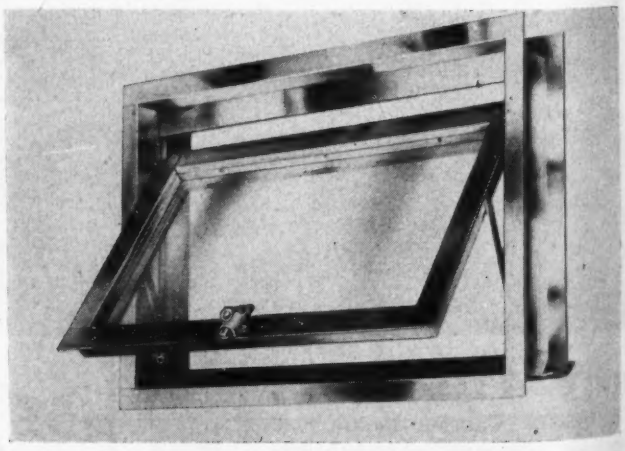
Most outside doors for residences are 1¾" thick. They are usually 3' 0" wide, so that all articles of furniture may be moved through them.

Most outside doors have glass in them, either for appearance or for light. For small panes of glass double strength (D.S.) is usually used, although doors with large glass areas may require plain plate glass.

From the design pages of doors in this section, it is possible to select both interior and exterior doors that will go with any type of architecture. Flush exterior doors may be cut to take any design of glass or may have a V-groove cut in them. The various parts of a door and its frame and trim are shown in the following illustration.

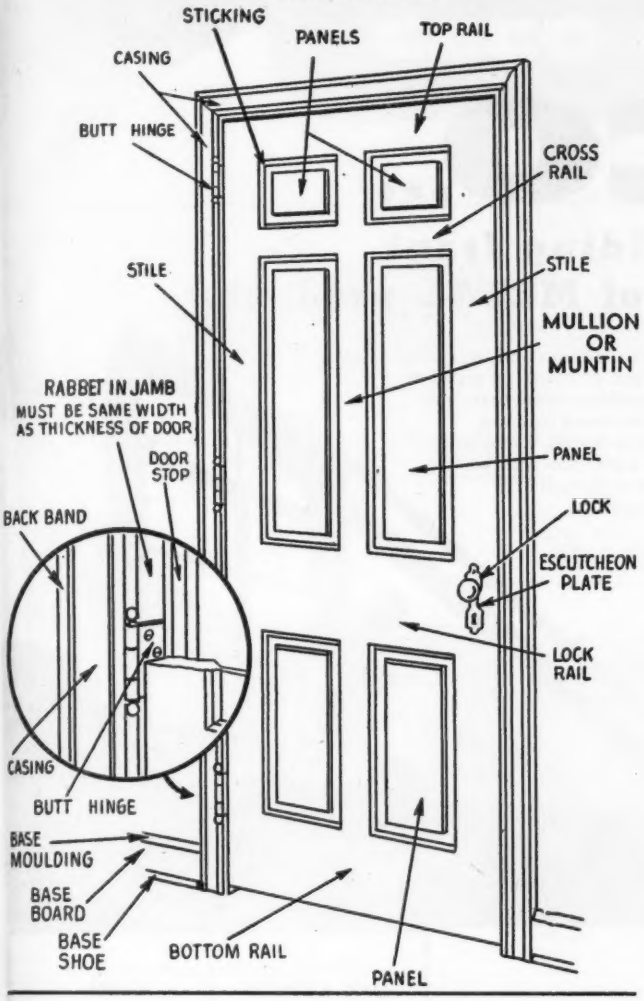
Interior Doors—The many different kinds for interior doors are shown on the door design page in this section. The popularity of the particular design of a door differs in each locality. It is necessary to carry a greater range of sizes in interior doors because of the varied requirements they have to meet. The sizes run from 1' 0" in width in multiples of 2" to 3' 0" in width. They are usually 6' 6" and 6' 8" high. Most yards stock interior doors in both white pine and fir. While pine stiles and rails stand up better than fir and are more easily worked by the carpenter in fitting and hanging, fir doors are about 25% cheaper.

DOUBLE HUNG window units are manufactured in wood and metal. Units are complete, including sash and actuating mechanisms, ready for installation in the rough opening. Many also have storm and screen combinations included.



METAL UNIT windows are made of aluminum and steel in all common types. This basement unit has a frame designed to fit standard masonry wall, and includes drip cap and flanges to insure perfect tight seal.

DOOR AND FRAME



The panels of a door may be either flat or raised, of fir or pine, or a hardwood such as gum or birch. Because an interior door may be either painted or stained and varnished, the kind of wood used in the stiles and rails and panels is of importance. It is important that types and kinds of interior doors are not mixed in a home.

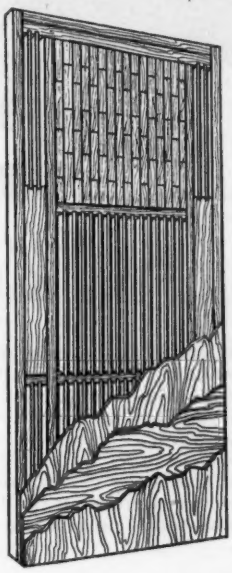
Flush Doors—Modern design has brought the flush door into use in the interiors of homes. It is available in both 1⅜" and 1¾" thicknesses. It is a veneered door with panels of hardwood—usually gum or birch.

French Doors—This is a door with a large glass area divided into small lights. It is divided either 2 lights wide and 5 lights high (10 lights) or 3 lights wide and 5 lights high (15 light). Glass may be either single strength (s.s.), double strength (d.s.) or plate.

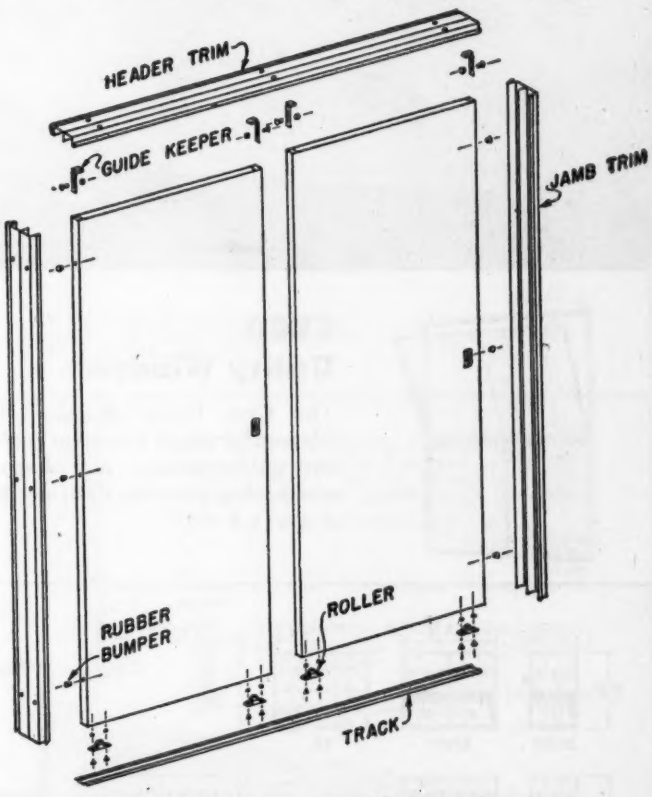
These doors are sometimes hung in pairs to fill wide door openings. When so used, an astragal is used on the meeting rail.

Inside Door Jambs—The frame, to which an interior door is hung is known as a "set of interior door jambs." It consists of two side pieces and a top piece called a "header." The side pieces are rabbeted so that the top piece fits into the grooves cut in the side pieces. Regularly these jambs are 5¼" wide, which is the width necessary to fit a 2 x 4 wall with two plastered sizes. Special care must be used to specify walls of varying thickness because of different width of studding or other types of wall finishes. Sets of interior jambs are sold either with or without the door "stops" which are set wherever necessary to properly hold the door in place. In estimating or taking orders, sets of jambs are listed by the size of the door to fit the opening, the width of the jamb required, and kind of wood.

EXAMPLE OF FLUSH DOOR CONSTRUCTION



TYPICAL SLIDING STEEL CLOSET DOOR



EXPLODED VIEW OF DOOR AND TRIM

Sliding Doors: Sliding doors are an established type of closure for many uses. Industrial types have been used for many years in factories and commercial buildings. Their use in cabinets and closets has also been a popular practice. Now, their widespread use as interior residence doors is evidence of their efficient functional service, and their attractiveness as a finishing material.

The development of thoroughly dependable hardware to actuate this type of door is responsible in large measure for their current acceptance by architects and builders, in addition to the fact that their space-saving features have proved highly important in the present building market.

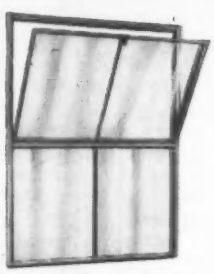
Sliding doors are made of both metal and wood for all uses. They are usually the flush type, and may be mounted singly, in pairs, or series, depending on the closure.

CECO...

Covers the building front with the broadest line of METAL products

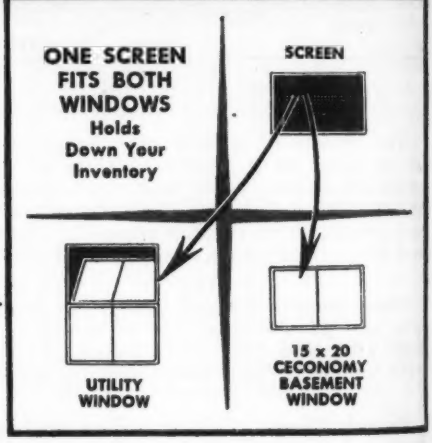
From coast to coast, from metal windows to metal lath, Ceco offers you a service and a building product line to meet your every need. Here one source—one invoice, can cover all your purchases. So order the easy Ceco way. Save time—save money, too. Ceco's large stocks are strategically located in warehouses from coast to coast.

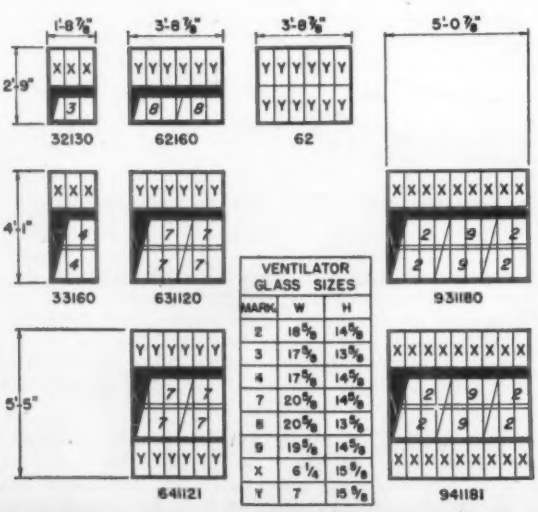
But Ceco's service doesn't end here—for behind every Ceco product is a creed of engineering excellence—the ceaseless, endless search for ways to make building products better. When you sell Ceco—you know you sell the very best. You assure your customers savings, too.



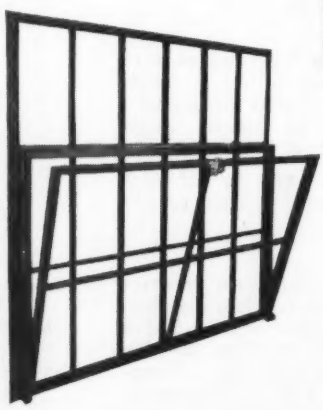
CECO Utility Windows

The Ceco Utility Window is especially adapted for use in basement areaways, private and public garages and shops. Two-point weathering, provides tight weather-seal. Size: 2′8½″ x 3′6¾″.





VENTILATOR GLASS SIZES		
MARK	W	H
2	18⅝	14⅝
3	17⅝	13⅝
4	17⅝	14⅝
7	20⅝	14⅝
8	20⅝	13⅝
9	19⅝	14⅝
X	6 ¼	15⅝
Y	7	15⅝



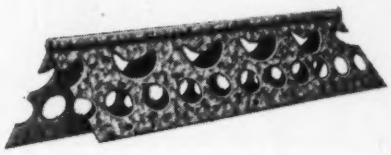
CECO Security Windows

Ceco Security Windows are designed for use in store buildings, warehouses and other buildings where adequate ventilation is required and burglary protection is of importance.

CECO STEEL

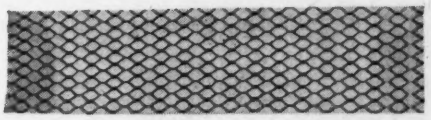
In construction products **CECO ENGINEERING** *makes the big difference*

CECO Metal Lath



ARCH FORM CORNER BEAD NO. 4AF—Used as a plaster key for outside corners of both arches and straight corner work. Also readily adaptable to other applications which require forming of the corner bead.

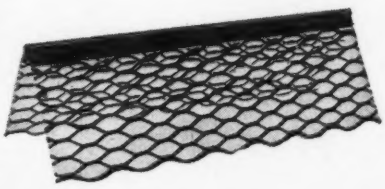
	Wt. per 1000 lin. ft.
No. 4AF Arch Form Bead 1½" Flange, 26 Ga.	180



STRIP LATH—Used to cover sections of walls and ceilings where joints might cause plaster cracks, and around window and door frames when metal lath is not used for plaster base. Made in strips 4" wide by 96" long.

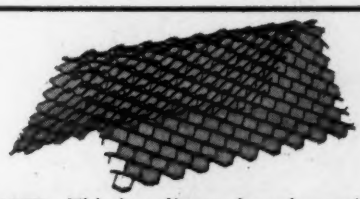
	Wt. per 1000 lin. ft.
4" x 96" Painted Copper Alloy Steel	90

75 pieces (600') per bundle



EXPANSION CORNER BEAD NO. 1A—Efficient wide flange corner bead for reinforcing outer or exposed angles. Strong plaster key.

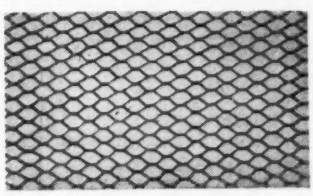
	Wt. per 1000 lin. ft.
26 ga. 2½" Flange, Galvanized	230



CORNA-LATH—This is a diamond mesh metal lath angle used over wood lath, gypsum lath and masonry where walls meet and walls meet ceilings, reinforcing interior corners and preventing cracking in plaster. Furnished in sizes 2" x 2" and 3" x 3", in 96" lengths and following widths:

	Wt. per 1000 lin. ft.
2" x 2" x 96" Painted Copper Alloy Steel	90
3" x 3" x 96" Painted Copper Alloy Steel	140

75 pieces (600') per carton



DIAMOND MESH LATH—Small mesh assures best results with minimum of plaster. Easily bent to any curve. Sheets—27" x 96", 2 sq. yds. each, packed 10 sheets, 20 sq. yds. to bundle.

2.5 Lb. Painted Copper Alloy Steel
3.4 Lb. Painted Copper Alloy Steel
3.4 Lb. Galvanized Steel
Also furnished in Dimpled Self Furring

CECO HOLLOW PARTITION STUDS Made from 16 gauge channel sections. Furnished painted in 6', 7', 8', 9', 10', 12', 14', 16', 18' and 20' lengths. Special intermediate lengths can be furnished.

Sizes and weights per M feet

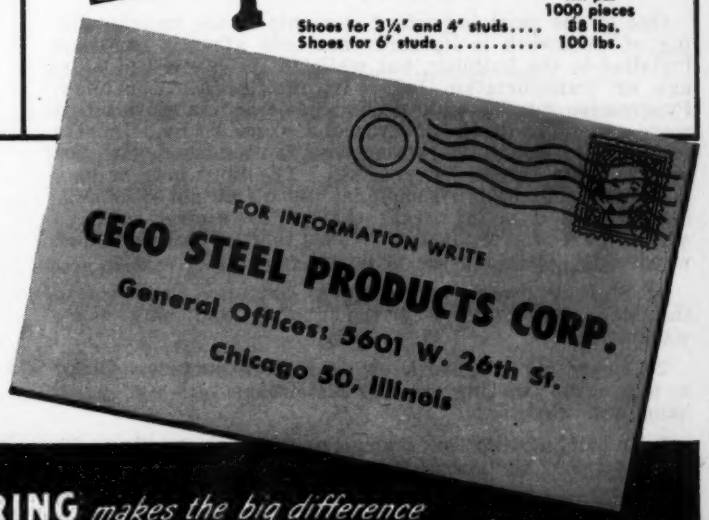
3¼"	600 lbs.
4"	660 lbs.
6"	880 lbs.

Ceilings and Floor Runner Tracks furnished in 10' lengths.

ATTACHMENT SHOES Attachment shoes are of 20 gauge metal. They are packed 250 per carton.

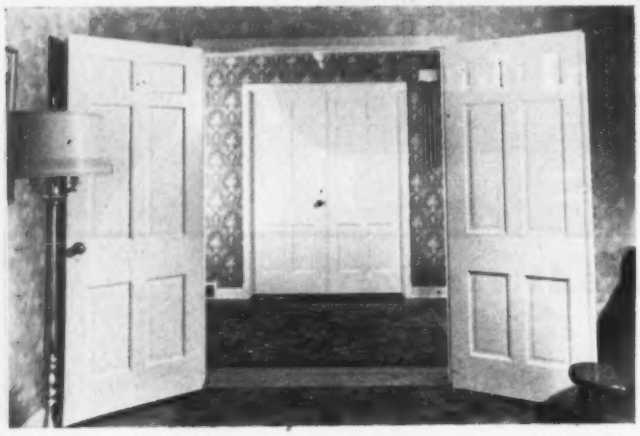
	Wt. per 1000 pieces
Shoes for 3¼" and 4" studs	88 lbs.
Shoes for 6" studs	100 lbs.

Other Ceco Products Include Rib Lath, Screeds, Picture Moulds, Channels, Tie and Hanger Wire, Arches and Casings.



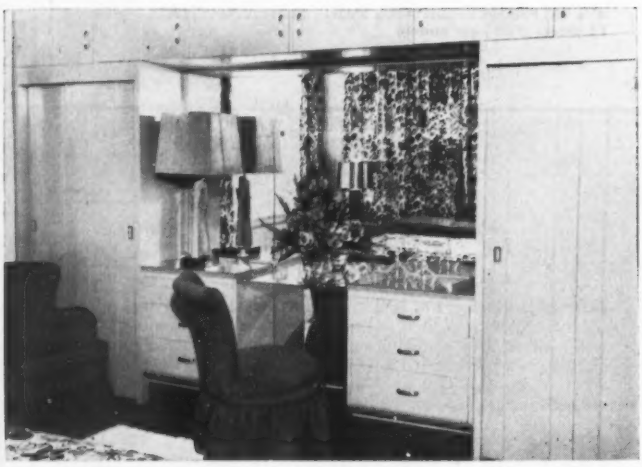
CECO STEEL ®

In construction products **CECO ENGINEERING** *makes the big difference*

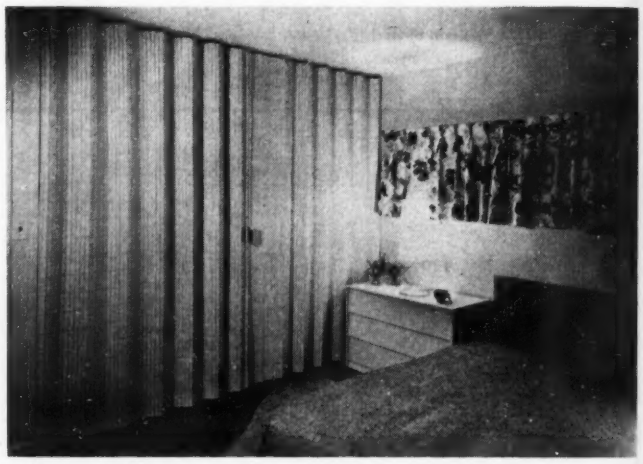


THE PANEL DOOR, with its charm and beauty, has high decoration value in a home, particularly one that follows the Colonial or period styles of furnishing.

FEW INNOVATIONS in functional designing can equal the modern sliding door for its space saving convenience. Current construction, where space is at a premium, has made sliding interior doors a widely used feature.



STORAGE WALLS are economical to install, and provide much needed space in a home. Used extensively in recent years in new housing, the idea is easy to apply to existing dwellings as well.



FLEXIBLE DOORS of basswood slats are especially popular as a closure for bedroom wardrobes. The between-slat spaces permit air to readily circulate, eliminating stale air formation and moisture condensation.

Flexible Doors are available in any door size required and are also supplied for room dividers in almost any size and width. One style has a metal frame covered with either fabric or plastic. Another type is made of wood slats that hang vertically, woven together into a fabric with strong seine twine. Both types are suspended by means of spaced hangers, which in turn are supported by an overhead channel.

CARE OF WOODWORK

One of the most important elements in the merchandising of woodwork is its care—not only after it has been installed in the building, but while in the process of storage or transportation before it reaches the consumer. Progressive retail lumber dealers are recognizing this fact more and more as the months and years go by. In case of failure of woodwork in the home, the lumber dealer who sold it is the first to be criticized. The fault may or may not be his, but he must shoulder the blame notwithstanding. Hence it is important that a few simple rules be made a part of every dealer's "sales talk" relating to stock woodwork. Here are the principal rules:

1. Store millwork inside, never outside. Exposure to the elements deteriorates the quality and may cause warping.

2. Never lay woodwork on an uneven surface. Doing so may cause twisting or other distortions. Always lay or hang woodwork flat.

3. When moving or transporting, protect edges by scuff strips or similar protection.

4. Millwork should not be delivered to the job until facilities for inside storage are available. It should never stand outdoors.

5. Never hang a door in a frame that is not straight and true. A twisted or warped frame means a twisted or warped door eventually.

6. Woodwork should never be installed when the house is wet or damp either from the elements or from freshly applied plaster.

7. Woodwork should be painted with three coats of white lead and oil or quality mixed paint. It should be repainted whenever necessary.

8. Tops, bottoms and edges of sash and doors should be fully painted before installation.

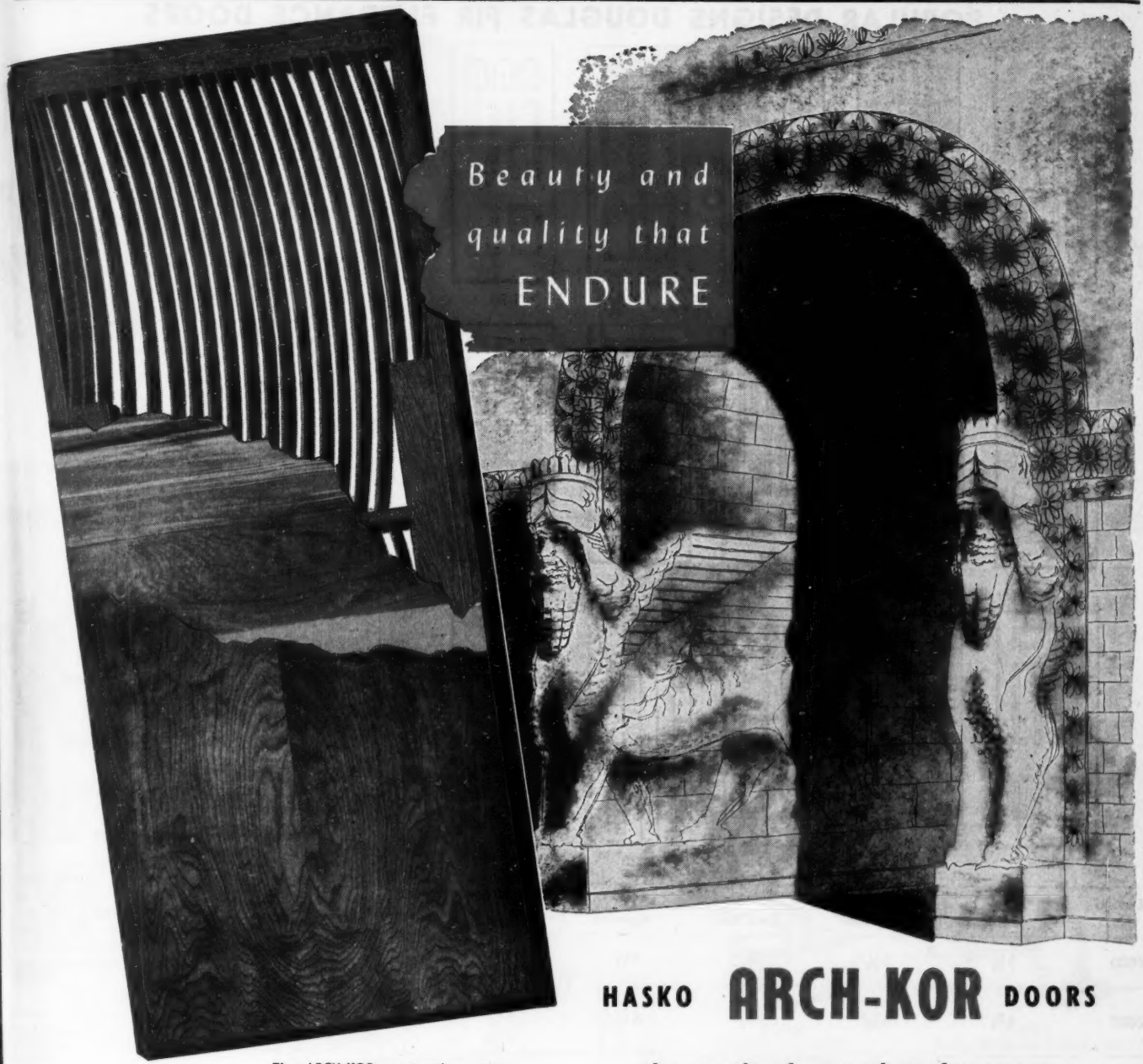
WEATHER STRIPPING

The heat losses caused by infiltration through cracks around doors and windows is always considerable and even on a newly constructed home with well fitted windows, at least 80 percent of the leakage can be eliminated by the installation of weather strip, with a probable savings of 20 percent in fuel cost. On old homes where the sash have shrunk, in many cases to the extent that the windows rattle, the leakage is so much greater that it is not unusual for home owners to find their fuel costs reduced as much as 40 percent by weather strip installation alone.

Weather stripping is produced in many styles, shapes and materials, among which are the following:

Surface Type

Narrow metal or wood members are provided with recessed slots in which strips of felt or synthetic rubber are firmly inserted. These are applied to the contact faces of the door or window, meeting the stop or stile and acting as a flexible, elastic barrier to infiltration.



The ARCH-KOR construction assures resistance to warping and complete support of the faces of the Hasko doors.

HASKO ARCH-KOR DOORS

the result of proved performance through the use of proved construction principles

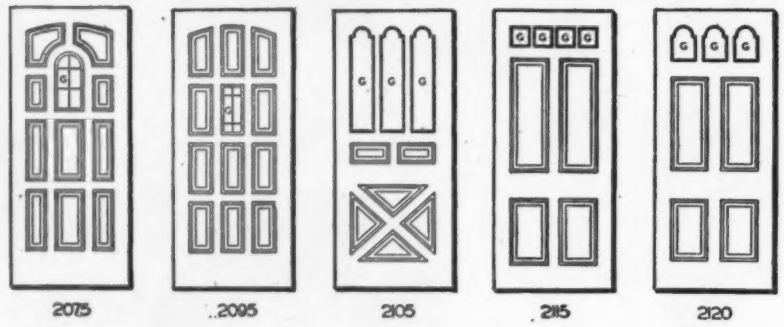
Since Neolithic Man's discovery of the principle of the arch a perfection of beauty *and* strength have been added to our structures. Since Haskelite Men utilized the principle of the arch in HASKO ARCH-KOR DOORS, their lasting beauty and enduring strength have created a constantly growing demand, which places them today in a position of top leadership in their field. The highest quality materials and the best in craftsmanship have helped build and maintain the reputations of suppliers of materials who specify and use HASKO DOORS. These are proofs of their worthiness of *your endorsement* and use. *Ask your supplier for HASKO DOORS.* Write for complete information.

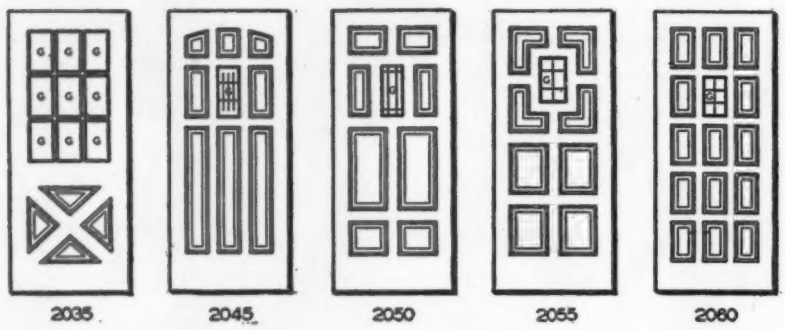
Hasko ARCH-KOR and SOLID-KOR Flush Doors are available faced with birch, mahogany, oak, maple, walnut, and gum.

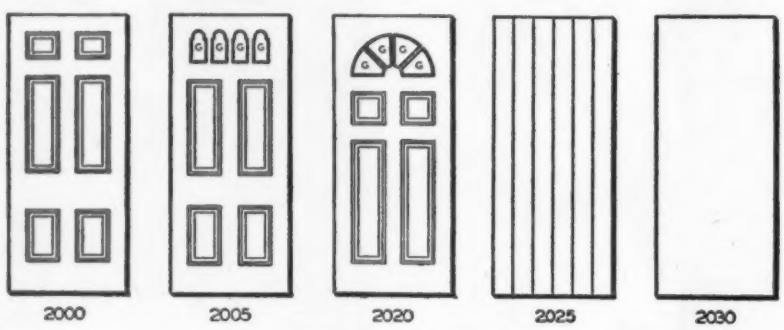
HASKO **HASKELITE MANUFACTURING CORP., Grand Rapids 2, Michigan**

One of the world's largest manufacturers of plywoods, metal clad plywood, and other laminated materials for use in industrial and consumer products.

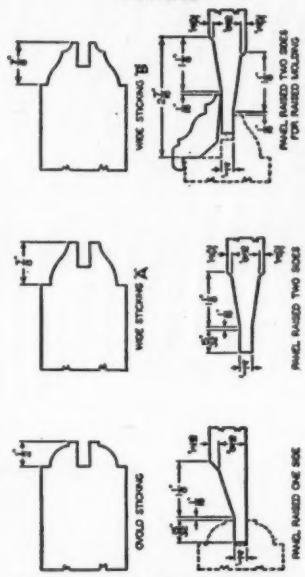
POPULAR DESIGNS DOUGLAS FIR ENTRANCE DOORS







STICKING AND PANEL DETAILS



All doors 1 3/4 inches thick.

Glass not furnished.

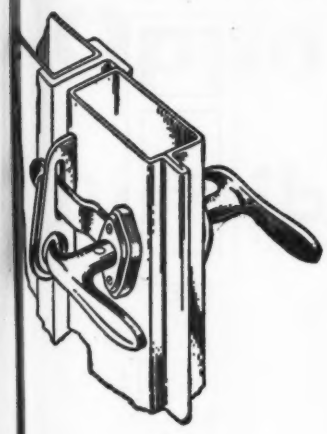
All panels, raised, solid vertical grain, old growth. Douglas fir.

Doors 3'x6' 8" or 3'x7' as Specified.

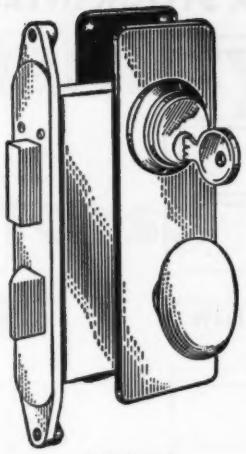
Grille furnished on 2045, optional on other models.

Wicket sash furnished for all doors.

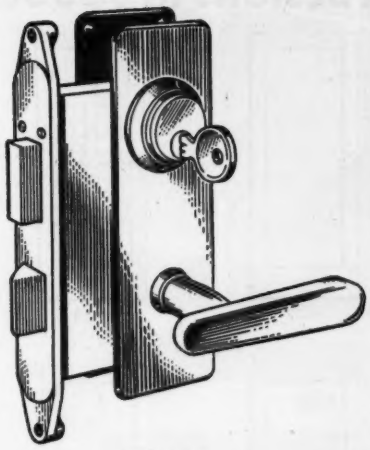
Design No.	Stiles	Top Rail	Rail and Lock Rail	Muntins	Bottom Rail	Sticking	Molding
2000	5⅜"	5⅜"	11⅜"	5⅜"	9⅜"	Ovolo or wide, A or B	Raised one side, optional
2005	5⅜"	6⅜"	9⅜"	5⅜"	9⅜"	Ovolo or wide, A or B panels only	Raised one side, panels only, optional
2020	5⅜"	5⅜"	5⅜"	5⅜"	9⅜"	Ovolo or wide, A or B panels only	Raised one side, panels only, optional
2025	5 Equal Grooves—one face. Rotary cut face veneers.						
2030	Rotary cut face veneers.						
2035	5⅜"	5⅜"	7¼"		8¾"	Ovolo	Not raised
2045	5⅜"	5⅜"		3¾"	11⅜"	Ovolo or wide, A or B	Raised one side, optional
2050	5⅜"	5⅜"	4½"	4½"	11⅜"	Ovolo or wide, A or B	Raised one side, optional
2055	5⅜"	5⅜"	4½"	4½"	11⅜"	Ovolo or wide, A or B	Raised one side, optional
2060	5⅜"	5⅜"	3¾"	3¾"	9⅜"	Ovolo or wide, A or B	Raised one side, optional
2075	5⅜"	5⅜"		3¾"	11⅜"	Ovolo or wide, A or B	Raised one side, panels
2095	5⅜"	5⅜"		3¾"	11⅜"	Ovolo or wide, A or B	Raised one side, optional
2105	5⅜"	5⅜"	7¼"	4½"	8¾"	Ovolo	Not raised
2115	5⅜"	5⅜"	9"	4½"	8"	Ovolo or wide, A or B	Raised one side, optional
2120	5⅜"	6⅜"	9⅜"	5⅜"	9⅜"	Ovolo or wide, A or B	Raised one side, optional



P-3528
Latch Hardware for swing doors

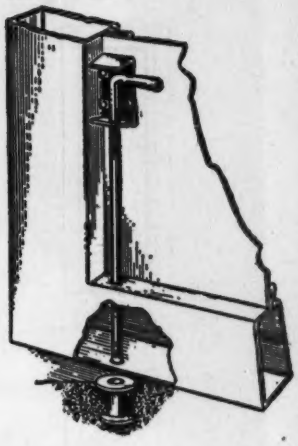


P-3500-EK



P-3500-EL

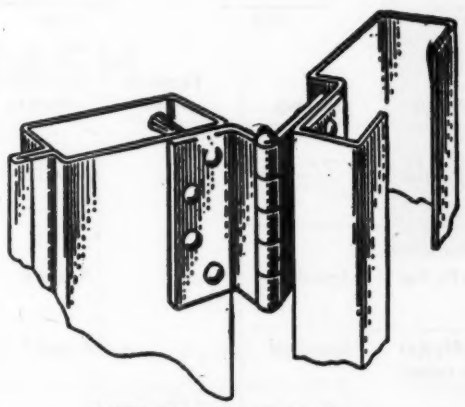
Mortise Locks with cylinder, for swing doors
Bronze Knobs and Escutcheons, U. S. 10 finish
Iron Lever Handles and Escutcheons



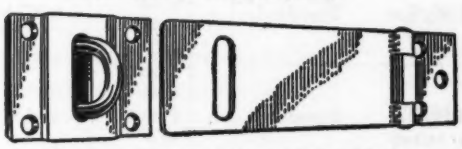
P-3517
Cane Bolt for slide doors

P-2993
Foot Bolt for double swing doors

P-2994
Chain Bolt for double swing doors

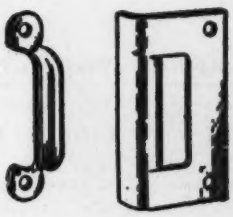


P-2996—Hinge for outswing doors
P-3618—Hinge for inswing doors

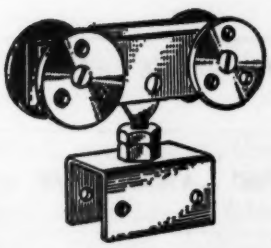


P-3521—Hasp and Staple Assembly for slide doors

P-1354
Hook Back and Ring for swing doors



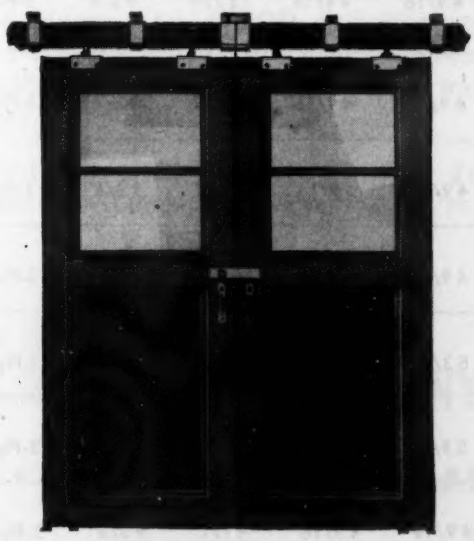
P-3527
Handle and Pull Assembly for slide doors



P-3540
Trolley Assembly for slide doors

P-3539
Roller Guide for slide doors

DOUBLE SWING TYPE



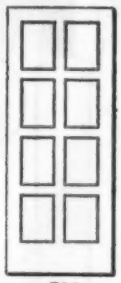
DOUBLE SLIDE TYPE

Printed in U.S.A.

POPULAR DESIGNS IN DOUGLAS FIR STOCK INTERIOR DOORS

F2

F20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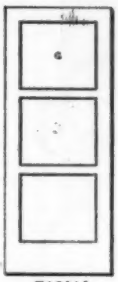
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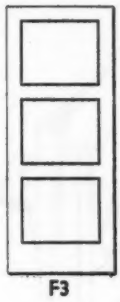
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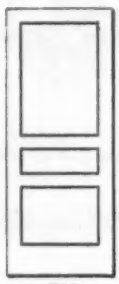
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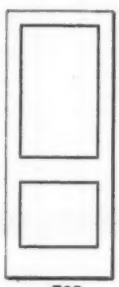
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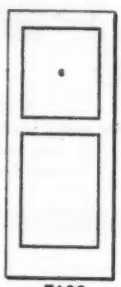
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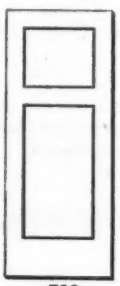
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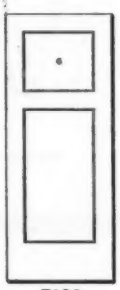
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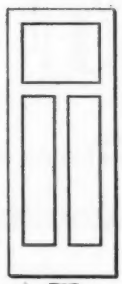
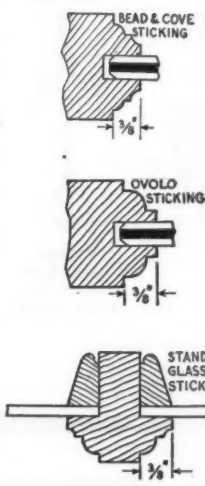

F62

Design No.	Stiles	Top Rail	Lock Rail	Bottom Rail	Panels	Sticking	Popular Sizes	Grades
F 2	4 9/16"	4 9/16"		9 3/8"	3-Ply flat			A and B
F 20	4 9/16"	4 9/16"		9 3/8"	3-Ply flat	Standard		A and B
F 88	4 9/16"	4 9/16"	2 7/8"	9 3/8"	3-Ply flat or raised	Standard		A and B
F 13 W	4 9/16"	4 9/16"	4 1/2"	9 3/8"	3-Ply flat	Standard	2'x6" 2'4"x6' 2'6"x6' 2'8"x6' 3'x6' 2'x6'6" 2'4"x6'6" 2'6"x6'6" 2'8"x6'6" 3'x6'6" 2'x6'8" 2'4"x6'8" 2'6"x6'8" 2'8"x6'8" 3'x6'8" *2'x7' *2'4"x7' *2'6"x7' *2'8"x7' *3'x7' *1 3/4 in. thickness only	A, B and C 1 1/8" MR
F 66	4 9/16"	4 9/16"	4 1/2" 7 3/8"	9 3/8"	3-Ply flat or raised	Standard		A and B
F 3	4 9/16"	4 9/16"	2 1/4"	9 3/8"	3-Ply flat	Standard		A, B and C 1 1/8" MR
F 33	4 9/16"	4 9/16"	4 1/2"	9 3/8"	3-Ply flat	Standard		A, B and C 1 1/8" MR
F 82	4 9/16"	4 9/16"	7 3/8"	9 3/8"	3-Ply flat	Standard		A and B
F 108	4 9/16"	5 3/8"	5 3/8"	9 3/8"	3-Ply flat	Standard		A and B
F 29	5 3/8"	5 3/8"		11 3/8"	3-Ply flat	Standard		A and B
F 129	5 3/8"	5 3/8"		11 3/8"	3-Ply flat	Standard		A and B
F 62	4 9/16"	4 9/16"	4 1/2"	9 3/8"	3-Ply flat	Standard		A and B

STICKING AND PANEL DETAILS



Three-eighths inch "bead and cove" or "ovolo" sticking shall be standard on all standard doors. "Bead and cove" sticking will be furnished, unless otherwise specified.

House Door thicknesses, 1⅛", 1⅜", 1¾"

Opportunity

Distributors:

RE ALL WOOD STORM SASH

BY now you know that the overwhelming demand for self-storing combination screen and storm sashes makes it essential that you handle them. And, now for the first time, here is an ALL WOOD combination which has all the features your customers want — at a price less than ½ that of the average metal combination — and no more than that of an ordinary screen and storm window.

Think of the sales you can make telling your customers that the new Moore Self-Storing Combination SCREEN and STORM SASH is a single, permanently installed unit with nothing to change, nothing to store. That it comes completely weather stripped and will fit any wood window frame. Or that the lower half of the storm sash slides open easily and smoothly for ventilation . . . or closes tightly for insulation against cold weather.

Best of all, you can tell them there's no chance of rusting or sticking . . . Moore Self-Storing Combinations are made of finest Ponderosa Pine and are toxic treated, making them rot proof and moisture resistant.

But, there's small need to sell you on the advantages of wood . . . for you're in the lumber business. We think you'll be quick to recognize that the Moore ALL WOOD Self-Storing SCREEN and STORM SASH is one of the greatest profit-making opportunities to come your way in a long time.

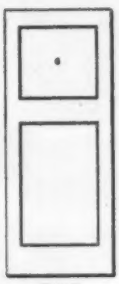
We'd like to tell you more about it. Just drop us a note on your letterhead saying you're interested.

MOORE SASH COMPANY

P. O. BOX 420 • SCOTTSBLUFF, NEBRASKA

POPULAR DESIGNS IN DOUGLAS FIR STOCK INTERIOR DOORS

F162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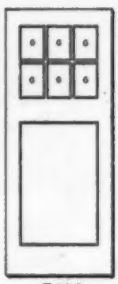
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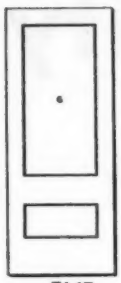
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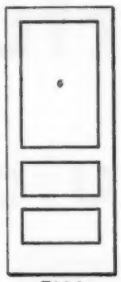
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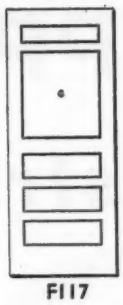
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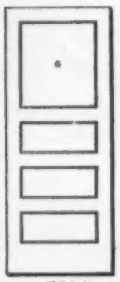
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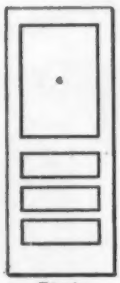
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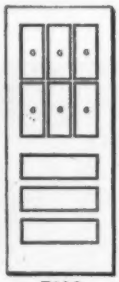
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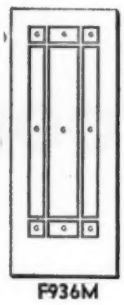
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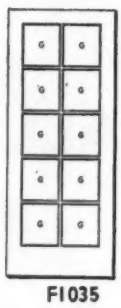
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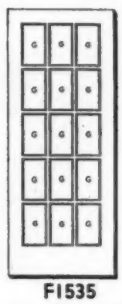

F1535

Design No.	Stiles	Top Rail	Lock Rail	Bottom Rail	Panels	Sticking	Popular Sizes	Grades
F 162	4 9/16"	4 9/16"	4 1/2"	9 3/8"	3-Ply flat or raised	Standard	2'x6" 2'4"x6' 2'6"x6' 2'8"x6' 3'x6' 2'x6'6" 2'4"x6'6" 2'6"x6'6" 2'8"x6'6" 3'x6'6" 2'x6'8" 2'4"x6'8" 2'6"x6'8" 2'8"x6'8" 3'x6'8" *2'x7' *2'4"x7' *2'6"x7' *2'8"x7' *3'x7' *1 3/4 in. thickness only	A and B
F 110	4 9/16"	5 3/8"	7 3/8"	9 3/8"	3-Ply flat	Standard		A and B
F 610	4 9/16"	5 3/8"	7 3/8"	9 3/8"	3-Ply flat	Standard		A and B
F 147	5 3/8"	5 3/8"	9 3/8"	11 3/8"	3-Ply flat or raised	Standard		A and B
F 114	4 9/16"	4 9/16"	4 1/2" 5"	9 3/8"	3-Ply flat or raised	Standard		A, B and C
F 117	4 9/16"	5 3/8"	3 3/8" 5 3/8"	9 3/8"	3-Ply flat or raised	Standard		A, B and C
F 214	4 9/16"	4 9/16"	4 1/2" 4 1/2"	9 3/8"	3-Ply flat or raised	Standard		A, B and C
F 118	4 9/16"	5 3/8"	3 3/8" 5 3/8"	9 3/8"	3-Ply flat or raised	Standard		A, B and C
F 618	4 9/16"	5 3/8"	3 3/8" 5 3/8"	9 3/8"	3-Ply flat or raised	Standard		A, B and C
F 37	5 3/8"	6 3/8"		18 3/8"		Standard		A and B
F 936M	5 3/8"	5 3/8"		11 3/8"		Standard		A and B
F 1035	4 9/16"	4 9/16"		9 3/8"		Standard		A and B
F 1535	4 9/16"	4 9/16"		9 3/8"		Standard		A and B

DOUGLAS FIR GRADE MARKS

One of these distinctive F.D.I. "grade trade-marks" appears on the bottom of every officially inspected Douglas fir door — and only on doors so inspected. Look for the F.D.I. seal. It is your symbol of fine craftsmanship, backed by rigid inspection.

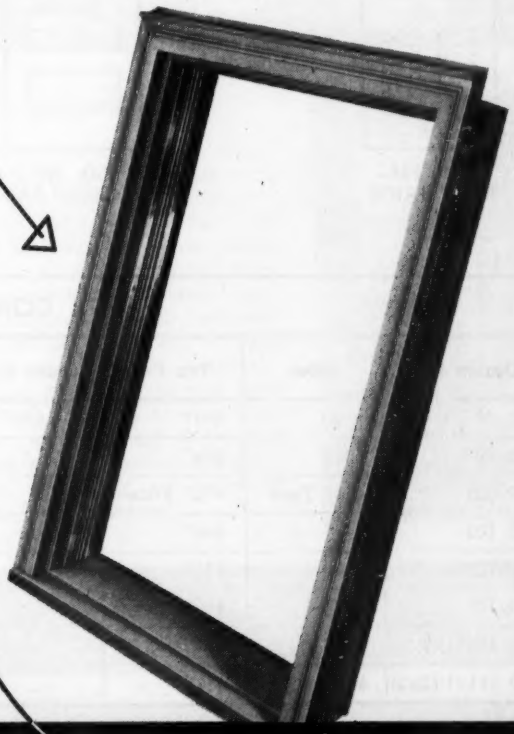
House Door Thicknesses, 1⅛", 1⅜".

BRAND NEW IN '52

the MALT-A-MATIC complete window unit with REMOVABLE SASH

MALT-A-MATIC*, MALTA'S new window unit, complete with convenient, removable sash, is just what you've been waiting for. It's a practical and economical unit — built with the famous MALTA frame. It comes to you fully weather-stripped — ready to set into the rough opening or knocked-down if desired. It is easily installed and requires only a slight turn of the adjustment screw for proper fitting. No more dangerous outside window washing.

**Currently Available only East of the Mississippi*

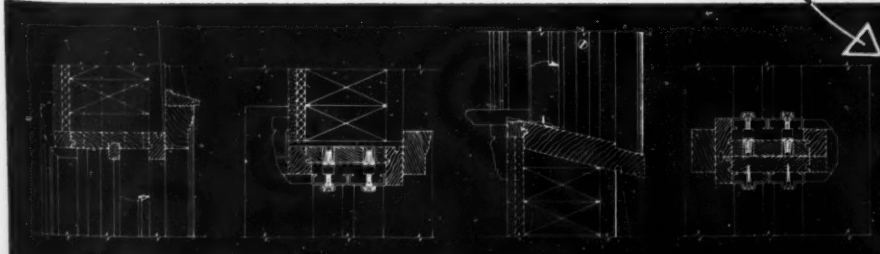


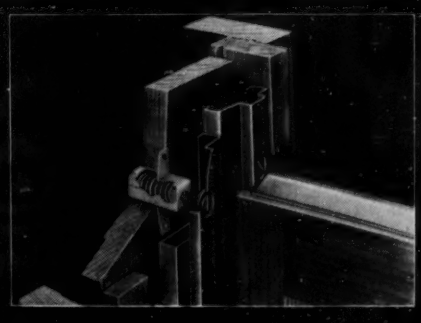
other MALT-A-MATIC advantages

No pulleys or balances needed. Entire unit is toxic treated. Fully modular. 2″ casing. Takes easily prepared stock sash and stock storm sash as well. Through the use of jamb liners, MALT-A-MATIC adapts to walls of varying thicknesses. Because the MALT-A-MATIC takes stock sash, easily prepared by the jobber or dealer, greater variety of window designs is immediately available to customers.

MALT-A-MATIC is real quality at an economical price. Select woods are milled to MALTA'S precision requirements. MALTA'S patented construction features which reduce heat loss, prevent leakage and give extra strength are incorporated in the MALT-A-MATIC window unit.

Send for illustrated catalog sheet.





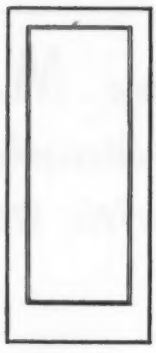
the MALTA manufacturing company

MALTA, OHIO — Supreme since 1901

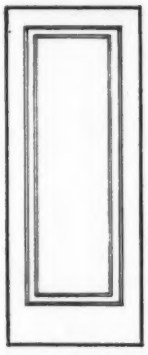
PONDEROSA PINE AND HARDWOOD VENEERED DOORS

POPULAR PATTERNS OF INTERIOR DOORS

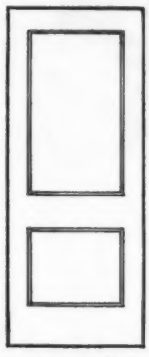
N.D. 99
THREE PANEL



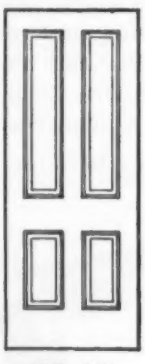
N.D. 100
ONE PANEL



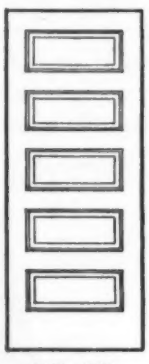
N.D. 101
INNER FRAME



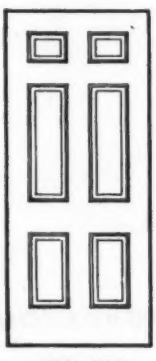
N.D. 102
TWO PANEL



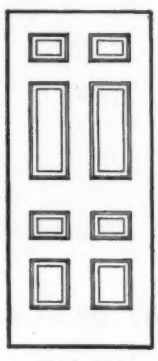
N.D. 106
FOUR PANEL



N.D. 107
FIVE CROSS PANEL



N.D. 108
SIX PANEL COLONIAL



N.D. 111
EIGHT PANEL COLONIAL

CONSTRUCTION DETAILS

Design No.	Stiles	Top Rail	Cross Rail	Lock Rail	Intermediate Rails	Mullions or Muntins	Bottom Rail	Panels
N.D. 99	4¾"	4¾"	4⅝"	4⅝"	.....	.....	9⅝"	Flat
N.D. 100	4¾"	4¾"	.....	.....	.....	.....	9⅝"	Flat
N.D. 101	4¼" Face	4¼" Face	.....	.....	.....	.....	9¼" or 9½" Face	Flat
N.D. 102	4¾"	4¾"	.....	8"	.....	.....	9⅝"	Flat
*N.D. 106	4¾"	4¾"	.....	8"	.....	4⅝"	9⅝"	Raised
*N.D. 107	4¾"	4¾"	.....	.....	4⅝"	.....	9⅝"	Raised
N.D. 108 (1)(2)(3)	4¾"	4¾"	.....	8"	3⅞" or 4⅝"	3⅞" or 4⅝"	9⅝"	Raised
N.D. 111 (1)(2)(3)	4¾"	4¾"	.....	8"	3⅞" or 4⅝"	3⅞" or 4⅝"	9⅝"	Raised

NOTES: (1) Height of Top Panels Overall 7⅛". (2) Doors 1'-6" are made 1 Panel Wide.
(3) Bottom and lock rails may be reversed when specified.
*Also for exterior use.

POPULAR SIZES				
1'-6" x 6'-6"	2'-0" x 6'-8"	2'-4" x 6'-8"	2'-6" x 6'-8"	2'-8" x 6'-8"
1'-6" x 6'-8"	2'-0" x 7'-0"	2'-4" x 7'-0"	2'-6" x 7'-0"	2'-8" x 7'-0"
2'-0" x 6'-0"	2'-4" x 6'-0"	2'-6" x 6'-0"	2'-8" x 6'-0"	3'-0" x 6'-8"
2'-0" x 6'-6"	2'-4" x 6'-6"	2'-6" x 6'-6"	2'-8" x 6'-6"	3'-0" x 7'-0"

STEEL BUILDING PRODUCTS

WITH ONE RESPONSIBILITY

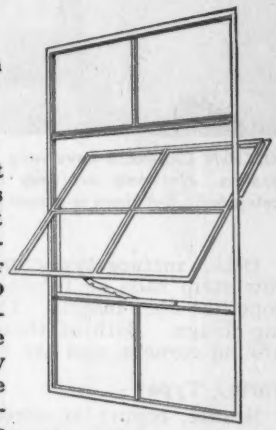
STEEL SLIDING CLOSET DOORS

- **Packaged Ready to Install**
- **Easy to install**
- **Cut construction cost**
- **Give added closet space**
- **Bigger selling point in home**

Steelcraft's new metal slide closet doors give extra storage space to any closet and give direct access too. No cutting . . . fitting . . . or unnecessary "extras". This door and frame is a complete packaged unit ready for installation!

PIVOTED STEEL WINDOWS

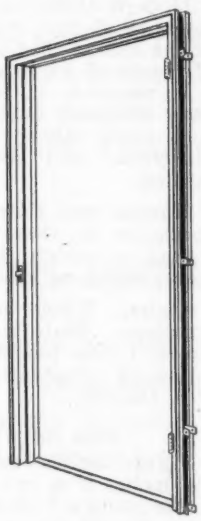
- Hot rolled new billet steel
- Sturdy heavy duty construction
- Double contact weathering
- Built-in bearing type pivot
- Easily installed



Made of hot rolled new billet steel, Steelcraft pivoted windows are engineered for permanent easy operation of the vented section. They cannot stick, warp or shrink and are BONDERIZED for protection. The outside sections are angle shaped to provide firm anchorage in the masonry or mullion connection. Double Flat contact weathering is provided on all four sides of the ventilator.

STEEL DOOR FRAMES

Use this modern building product at a great reduction in cost. One-piece all welded construction . . . won't crack, shrink, swell or warp. Reinforced mitred corners won't open. Hinges spot welded to frame; adjustable brass strike plate furnished.



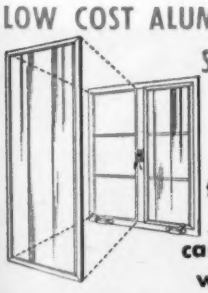
KNOCKED DOWN DOOR FRAMES

Knocked down door frames are designed for economical shipping, for maximum storage space, for quick easy assembly and installation. They provide long trouble-free service and neat appearance.

STEEL DOOR

Steelcraft industrial steel doors will not warp, shrink, swell, chip or splinter. They are fire-resistant and will give years of trouble-free service. They come to the job with lockset and hinge cut-outs already fabricated to receive standard tubular lock-sets . . . no fitting, no drilling or mortising, simply insert hardware and hang door. Rights and lefts are interchangeable by reversing the doors. Steelcraft doors are finished with a special baked-on enamel providing an excellent base for field painting.

LOW COST ALUMINUM STORM SASH



for any metal casement window

Easily installed by home owner on inside of casement . . . just like screens. No fitting, no cutting or trimming, no special tools. Packaged for over the counter sales.

STEEL LINTELS

Steelcraft formed steel lintels are available in a wide range of stock sizes for any window or door opening. Continuous ribs strengthen the heavy gauge steel, and provide an excellent base for brick and mortar. All lintels are BONDERIZED.

ROSSMOYNE, OHIO NEAR CINCINNATI

STEEL Craft

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THE STEELCRAFT MANUFACTURING CO., DEPT. AL-452
9017 BLUE ASH ROAD, ROSSMOYNE, O. (In Greater Cincinnati)

Please send literature on full line ☐

I am particularly interested in_____

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Name_____ Title

Company Name_____

Business Address_____

City_____ Zone_____ State_____

KITCHEN CABINETS have long been an excellent sales item for many dealers. Not only are they a necessary item in every new home being built, but there is a vast potential in the modernization field too.

BUILT-INS go far beyond the old established cabinet and corner cupboard line. Here storage space has been incorporated in a built-in fixture that also includes a bunk bed.

Other surface types include either molded felt in narrow strip rolls or fabric-enclosed stitched members with rope-like fiber inserts. The stitched edge acts as the nailing flange. Both of these are quite pliable, can be bent around corners, and are simple to cut and fit.

Spring Type

Bronze, copper or other resilient rust-resisting metals are processed into thin single or double thickness leaves and formed into strips of standard-size lengths for doors and windows. These are applied in window stiles and door jambs. By nailing the pre-punched nailing edge to the frames, the spring action of the leaf permits it to remain in close contact with the door and window, preventing considerable infiltration. For doors and door sills or saddles, heavier gauge metals are provided.

This type of weather stripping is usually packaged in cardboard tubes. A complete set of the required members to fit a specific opening, application directions, and rust-proof nails are included in the package.

Recess Type

These consist of rolled, tongued and grooved, narrow-width sections of light gauge zinc, aluminum or similar rust-proof metals.

To apply this type of weather stripping, a groove is cut in the sash or door with a special grooving plane. The metal weather stripping is attached to the stile or jamb and accurately fits the groove. This application is widely used on existing structures.

Prefabricated Type

Several outstanding sash, door and frame manufacturers have developed techniques by which weather stripping is incorporated with the sash and frames at the time of manufacture. Economy of factory-engineered precision methods, increased efficiency because of complete unit production, and lowered over-all costs to the consumer appear to be a logical consequence of these efforts.

Caulking

While not considered weather stripping in the true sense of the term, caulking is recommended practice around the outside of frames and where the sills rest on masonry walls.

Millwork

Cabinets: Built-ins of all types are becoming more and more an established part of the modern home. Houses sold in recent years have been complete packages, including cabinets in kitchens, bathrooms, and service halls.

Modern designing also provides in an increasing degree for book shelves, corner cabinets, storage walls, etc. even to the extent that some of these items serve the function of pieces of furniture.

In response to this trend, manufacturers of millwork have designed and added to their lines of merchandise such stock cabinets as fit these requirements. These are illustrated and described in the individual producer's catalog.

Mantels and Entrance Frames. Certain manufacturers specialize in these prefabricated units. They are designed to match types of architecture and are ordered from selections made from the catalogues.

Stairs. Whole books have been written on stair construction. Stair work, except for the simplest type of stairs, is the job of the professional stair builder. The following illustration will identify the principle parts of a stairway.

Rule for Figuring Stair Rises and Runs

Figure the rise as close to 7 inches as possible, not over 7½ inches if it can be avoided. The run (that is the cut in the stringer) should be between 9 and 10 inches. Head room should be as close as possible to 6 feet 6 inches.

For basement stairs the rise can be up to 8 inches, the run about 8 inches, on an open plank stair without

MANTELS are a necessary item for finishing off most fireplace installations. Modern designs add a marked decorative touch to a room, as well as provide the functional service of a trim.

OTHER IMPORTANT items of millwork include shutters, entrance door frames, cornices, etc. The market for these products is not confined to new construction, but have high potential in home maintenance and improvement.

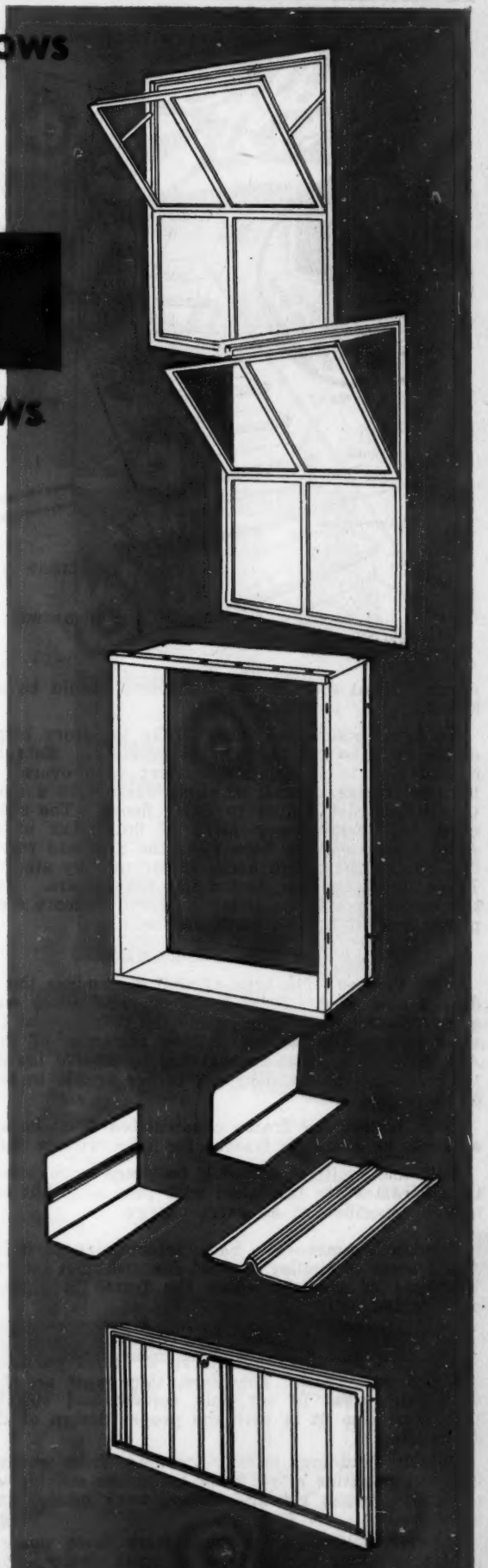
VENTO "CHAMPION" UTILITY WINDOWS

Manufactured from heavy solid steel bar shapes to give lasting service. Ventilator tilts in at top for normal ventilation and protection against drafts and rain. Each sash furnished with a positive cam action lock.

STEEL WINDOWS...

VENTO "CHAMPION" BARN WINDOWS

Similar to the utility types with the addition of side draft shields.



VENTO STEEL CASINGS

Vento Casings are made of 18 gauge hot rolled carbon steel, finished with one prime coat of grey paint. They provide speed in erection and save money by eliminating the cost of plaster returns, stools and trim. Vento Casings fit all standard size casement windows and mullioned windows up to 6 lights in width. Available in 4½" or 5¼" standard jamb widths.

VENTO STEEL LINTELS

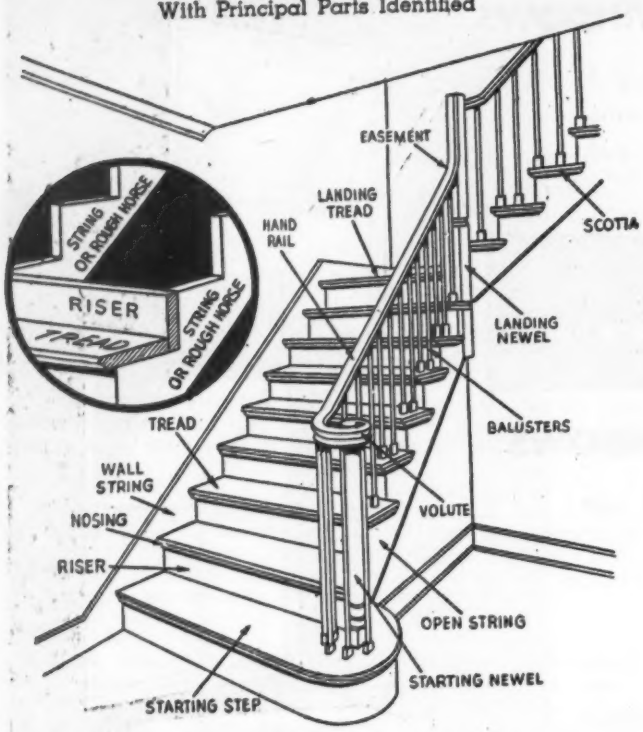
Of ample load-bearing capacity for window or door openings. Formed lintels of 10 gauge steel for block construction, with stiffening crimp in center, in lengths from 2½ ft. to 5 ft. Formed lintels for brick construction 2½ ft. to 5 ft. long, 3½" x 3½" x 11 gauge; 5½ ft. to 7 ft. long, 5½" x 3½" x 10 gauge.

VENTO "CHAMPION" BARRED BASEMENT WINDOWS

Provide maximum protection and 100% screened ventilation. Solid steel bars, ½" diameter, permanently welded into the window frame at four inch centers prevent outside entry or passage of material from the inside. Available in three standard basement sizes, putty or puttyless types.

249 COLORADO AVE., BUFFALO 15, N. Y.

OPEN STAIR
With Principal Parts Identified



risers. Head room in the basement should be at least 6 feet.

To figure risers and runs: Take the story height and divide by 7 to get the number of risers. Establish the closest rise to 7 inches consistent with overall height, then scribe the number of risers desired on a story pole (the height finish floor to finish floor). The story pole must be straight—any piece of finish 1x2 or similar. After the above has been done the rise and run can be laid out on the rough horse of stringer by steel square. There is always one less tread than risers. By using this method platforms or landings will be more accurately placed than if figured mathematically.

OUTSIDE FRAMES

Door Frames—The type of wall determines the kind of door frame used. Solid brick or solid stone walls require "plank" frames for which the thickness of the wall must be specified as well as the thickness of the door. All door jambs must be rabbeted to receive the door, so the thickness of the door 1¾ inches or 1⅜ inches must be given.

Door frames for frame construction must be specified as such, as are door frames for brick veneer walls.

Sills are omitted on brick buildings with stone sills. Other frames are furnished with pine sills, but oak sills may be specified at an extra charge.

Window Frames—The basic information to order window frames is similar to that for ordering door frames. The type of wall in which the frame is placed must be specified.

MOULDINGS

Although all mouldings serve a useful purpose, they are also decorative. Therefore, they must be of a size and design that is not only correct and suitable but they must also fit in with the proper design of the unit or building.

Outside mouldings usually are made from woods whose inherent qualities allow them to endure outside weather conditions, resist rot and decay, work easily, and hold paint well.

Interior mouldings are made from those woods which lend themselves to the type of finish desired—paint or enamel, stain and varnish, or wax. White pine, fir, yellow pine, or such hardwoods as oak, birch and gum, are all used for interior trim.

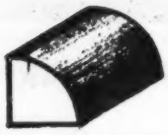
Manufacturers use standard numbers to identify each item of moulding and its size. Your customers order by name and size. When you order mouldings from the manufacturer or his jobber, it is well to order by both name and number.

All mouldings are measured for size on the flat side. The thickness size is listed according to the thickness size of the material from which it can be run.

All mouldings come in random lengths—6 ft. to 16 ft. "Random length" means an assortment of all even lengths as opposed to specified lengths. They are estimated, priced and sold on the lineal foot (running foot) basis.

There are many patterns and sizes of mouldings that are not carried commonly as stock items in the average retail yard. You will find them listed in the Standard Moulding Book published by manufacturers.

STOCK OUTSIDE MOULDINGS



QUARTER ROUND

8057	¼ x ¼
8063	½ x ½
8064	⅜ x ⅜
8065	¾ x ¾
8067	1⅛ x 1⅛

A moulding whose cross section would be one quarter of a circle—used both as an inside and outside moulding in square corners to cover the uneven joints where two boards come together. Makes a tight, serviceable corner easily cleaned.

LATTICE

8280	⅝ x 1⅛
8281	⅝ x 1⅜
8282	⅝ x 1¾

These thin strips are popularly used to cover flat joints, such as plaster board or wall board sheets. They are also used for making "lattice work" to go under porches, and to make fences, gates, and trellises.

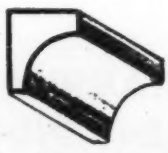
To find the amount of lineal feet of lattice required for a panel:

1⅛ inches wide—multiply the area by 12.
1⅜ inches wide—multiply the area by 9.
1¾ inches wide—multiply the area by 8.

HALF ROUND

8075	¼ x ⅞
8076	⅝ x ⅝
8077	⅜ x 1⅛
8078	½ x 1
8079	⅝ x 1¼
8080	¾ x 1⅜

Suitable for covering joints or nailing to the edges of shelves and other boards.



COVE

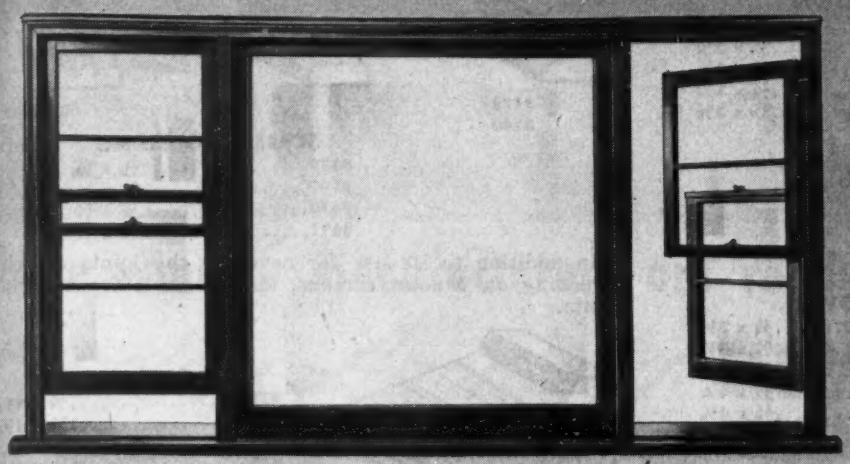
8060	¾ x ¾
8061	¾ x 1⅛

In its smaller sizes cove moulding is also used as an exterior moulding since it can be used interchangeably with quarter round for the same purposes.

BED

8036	¾ x 1¼
8038	1⅛ x 1¾

Bed mouldings are used to finish off the fascia just underneath the roof boards and shingles, and also as a member of the cornice. See Cornice details.



THE Etling WINDOW SWINGS IN

Put the ETLING WINDOW

To Work For You

Sales appeal PLUS . . . that's the story — in a nutshell — of the in-swinging Etling Window. It turns wearisome window washing into a quick, safe operation. A flick of a tab swings both sash into the home within easy reach. The sash glide up and down in any position.

And, the Etling Window possesses a score of other outstanding features that make home buyers, builders and lumber dealers stop . . . look . . . and **buy!**

- **Certified kiln-dried redwood**
- **Twindow or Thermopane-glazed picture windows**
- **Overhead balances**
- **Quick delivery**

AN ATTRACTIVE STYLE FOR EVERY HOME

T.M.—Property of Weatherseal, Inc.

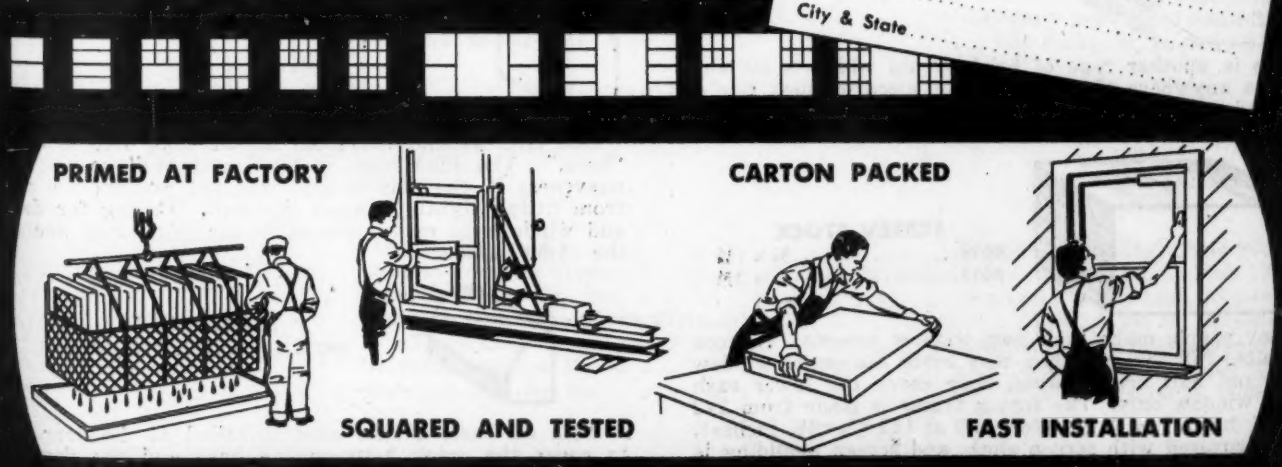
WRITE FOR CATALOG, SPECIFICATIONS

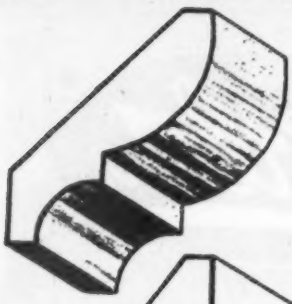
ETLING WINDOW
Dept. AL
Barberton, O.
Please send me complete data concerning Etling Windows.

Name .....

Address .....

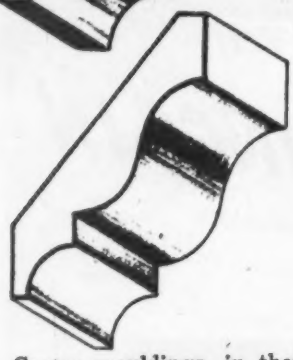
City & State .....





CROWN

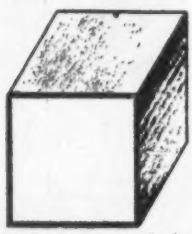
8016.....¾ x 1¾
8018.....¾ x 2¼
8019.....¾ x 2¾
8020.....¾ x 3¼
8023.....¾ x 3⅝



CROWN

8009.....¾ x 3⅝
8010.....¾ x 2¾
8011.....¾ x 2¼
8012.....¾ x 4⅛
8013.....¾ x 4⅝
8014.....¾ x 3¼

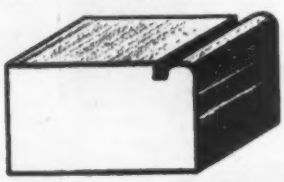
Crown mouldings, in their smaller sizes, are used for the same purposes as bed mouldings. For larger cornices and wider fascia the wider sizes are used. See Cornice details.



BALUSTER STOCK

8900½.....¾ x ¾
8900.....1⅛ x 1⅛
8901.....1⅜ x 1⅜
8902.....1⅝ x 1⅝

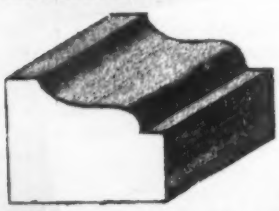
Baluster stock is a square piece of clear lumber which is used for building balustrades on porches. It is cut to fit between the toprail and the bottom rail which are usually two inches thick and of varying widths according to the design of the balustrade.



BRICK MOULDING

8157.....1⅛ x 1⅝

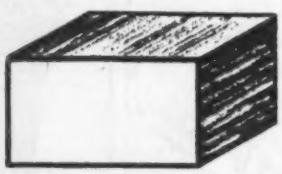
This moulding is used on door and window frames instead of casing on solid walls of brick or cement block construction.



BRICK MOULDING

8441½.....1⅝ x 1⅝

This is another type of brick mould which is suitable for use anywhere that a moulding piece of such size is required. Many times used as a moulding on rake cornice.



SCREEN STOCK

8614.....¾ x 1¾
8615.....¾ x 2¾

Many people make their own window screens. Screens are called full screens when they cover the entire window space and half screen when they cover the lower sash of the window only. The screen frame is made from 1x2 (¾x1¾ inches) with a bottom rail of 1x3 (¾x2¾ inches). This is covered with screen cloth, and screen moulding is placed over the edges of the screening.

8139
8140

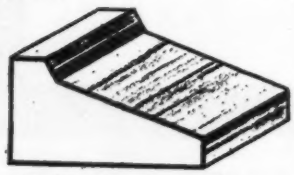
8610

8611

SCREEN MOULDING

8139.....⅛ x ⅜
8140.....⅜ x ¾
8610.....¼ x ¾
8611.....¼ x ¾

In addition to its use for covering the joints of wire screening on window screens, it is suitable for covering joints.



DRIP CAP

8283½.....¾ x 1⅜
8283.....1⅛ x 1⅜
8284.....1⅛ x 2
8285.....1⅛ x 2½

Drip Cap is really a part of a window frame and a door frame. It is placed over the top casing of those frames so the water will be carried away from the frame. It is also used in a similar manner and for the same purpose over the outside baseboard or skirt board around a house.

GLASS BEAD

8570.....½ x ⅝

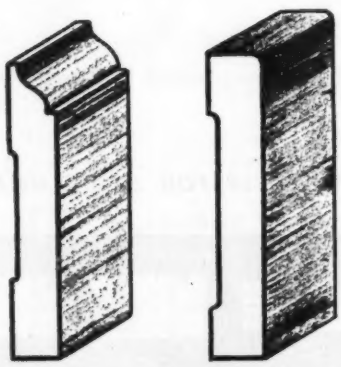
Often a glass bead is used to hold glass in place in doors. It also serves for decorative purposes.

STOCK INTERIOR MOULDINGS

Inside mouldings are used principally for trimming the rough edges of the interior wall around doors and windows and at the floor line around the rooms.

Recently the style in interior finish has changed from using wide widths of casing and base to a narrower width. The narrower trim is called "narrow line." This necessitates carrying the old style in small quantities to accommodate the remodeling of old houses.

The styles of interior trim design are numerous and the thicknesses of interior mouldings vary from locality to locality. In general, there are two styles—round edge and moulded edge.



BASE

8712.....½ x 3¼
8712.....½ x 4¼

R.E.....½ x 3¼
R.E.....½ x 4¼

The trim around the room at the floor line is called "base." The back side is "hollowed out" so that an uneveness in the plaster coat will not prevent the base from fitting tightly against the wall. Casing for doors and windows is manufactured in the same way and for the same reason.

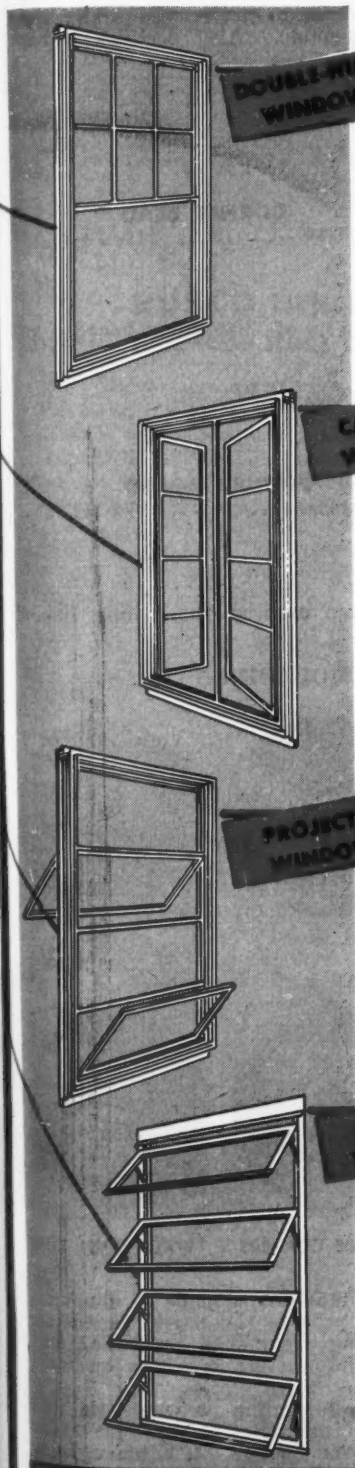
BASE SHOE

8422.....½ x ¾

With all base, a base shoe is nailed at the floor line to cover the crack between the base and the flooring. Shoe differs from quarter round in that it is narrower.

ALUMINUM WINDOWS

These window manufacturers are ready to supply you with *Quality Approved* ALUMINUM WINDOWS



DOUBLE-HUNG WINDOWS

The Adams & Westlake Company	1102 No. Michigan, Elkhart, Ind.
Alsco, Inc.	Box 270, Akron 8, Ohio
The Aluminum Window Corp.	Stewart Avenue, Garden City, N. Y.
Cupples Products Corp.	2650 So. Hanley Road, Maplewood, St. Louis 17, Mo.
General Bronze Corp.	Stewart Avenue, Garden City, N. Y.
Metal Arts Mfg. Co., Inc.	Harwell & Oakcliff Rd., Atlanta, Ga.
Reynolds Metals Co. (Parts Division)	2000 S. 9th St., Louisville, Ky.
Sterling Windows, Inc.	369 Lexington Ave., New York 17, N. Y.
J. S. Thorn Co.	Allegheny Ave., Philadelphia 32, Pa.
Windalume Corporation	323 56th St., West New York, N. J.

CASEMENT WINDOWS

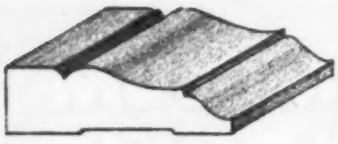
Alcasco Products Co.	1780 Creston cor. Laketon, Muskegon, Mich.
All-Lite Metal Window Co.	Emilie Road & Green Lane, Bristol, Pa.
Aluminum Home Products Co.	Carr St. & Southern Ry., Knoxville, Tenn.
The Aluminum Window Corp.	Stewart Avenue, Garden City, N. Y.
Michael Flynn Mfg. Co.	700 East Godfrey Ave., Philadelphia 24, Pa.
General Bronze Corp.	Stewart Avenue, Garden City, N. Y.
Reynolds Metals Co. (Parts Division)	2000 S. 9th St., Louisville, Ky.
J. S. Thorn Co.	Allegheny Ave., Philadelphia 32, Pa.
Timm Industries, Inc.	5245 W. San Fernando Road, Los Angeles 39, Cal.
Union Aluminum Co., Inc.	Sheffield, Ala.
Universal Window Co.	950 Parker St., Berkeley 10, Cal.
Ware Laboratories, Inc.	3700 N. W. 25th St., Miami, Fla.

PROJECTED WINDOWS

The Wm. Bayley Co.	1200 Warder St., Springfield 99, Ohio
Cupples Products Corp.	2650 So. Hanley Road, Maplewood, St. Louis 17, Mo.
Michael Flynn Mfg. Co.	700 East Godfrey Ave., Philadelphia 24, Pa.
General Bronze Corp.	Stewart Avenue, Garden City, N. Y.
J. S. Thorn Co.	Allegheny Ave., Philadelphia 32, Pa.
Universal Window Co.	950 Parker St., Berkeley 10, Cal.

AWNING WINDOWS

The Wm. Bayley Co.	1200 Warder St., Springfield 99, Ohio
Cupples Products Corp.	2650 So. Hanley Road, Maplewood, St. Louis 17, Mo.
Metal Arts Mfg. Co., Inc.	Harwell & Oakcliff Rd., Atlanta, Ga.
Reynolds Metals Co. (Parts Division)	2000 S. 9th St., Louisville, Ky.
J. S. Thorn Co.	Allegheny Ave., Philadelphia 32, Pa.
Universal Window Co.	950 Parker St., Berkeley 10, Cal.
Ware Laboratories, Inc.	3700 N. W. 25th St., Miami, Fla.



CASING
8305-A.....¾ x 2½
8305-B.....¾ x 3¼

CASING
M-1267.....¾ x 2½

Casing is placed around door and window openings to conceal the break between the plaster, or other wall covering, and the frame of the window or door.

Most "narrow line" casing used today has one moulded edge. It is either 2½ or 3¼ inches wide. The two perpendicular pieces of casing on both a window and a door are known as "side casings," and the horizontal piece at the top is known as a "head casing." The side casings and head casing are joined together at the top of the opening by a mitered joint. See Window and Frame detail and Door and Frame detail.

STOOL
8269½.....¾ x 2¾
8269½.....¾ x 3¼

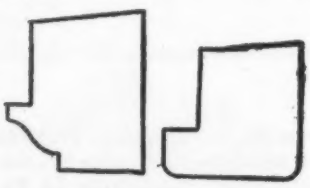
The cross piece at the bottom of the window on which the side casing rests is called a "stool." It is made to fit over the sloping sill of the window frame and is cut to fit between the jambs of the window frame and extends just beyond the side casings.

The apron is nailed just beneath the stool. It is the same design and size as the casing. However, its back is not "hollowed out" as in casing so that it may fit tightly against the finished wall surface.

STOPS
8540.....½ x 1⅛
8541.....½ x 1⅜
8542.....½ x 1⅝

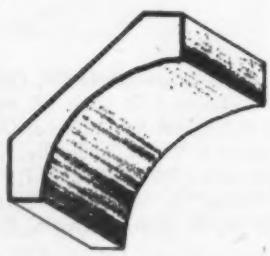
STOPS
8089.....½ x 1⅛
8098.....½ x 1⅜
8090.....½ x 1⅝

Stops are used to hold doors in their proper place when closed and to hold the lower sash in place on the inside and at the same time to permit it to slide up and down. 1⅜ and 1⅝ inch stops are used as door stops.



Back Band is sometimes placed around the outside edge of the casing, both at the top and sides, to create the appearance of a heavier trim.

Whenever there are two or more windows in a multiple frame, the trim that fits between the windows is called a mullion casing. As the space between such windows varies depending on the size of the box which carries the window weights, or the type of balances used, so does the width of the mullion casing. Care must be used to specify the correct width of the mullion casing.

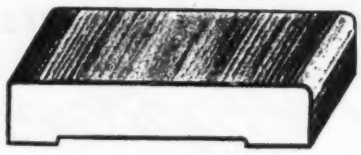


SPRUNG COVE
8024.....¾ x 1¾
8026.....¾ x 2¾

A sprung moulding is often used at the ceiling line of rooms instead of picture moulding when there is need of a wider moulding.

CLOSET POLE
0000.....1⅜ x 1⅜

Used in closets for clothes poles, for curtain and drapery rods and for handrails on enclosed stairways where they can be fastened to the wall with brackets.



CHAIR RAIL
8627.....⅛ x 2½

Often put around the room to protect the walls from tops of chairs, hence its name. Also used as a hook strip in closets.

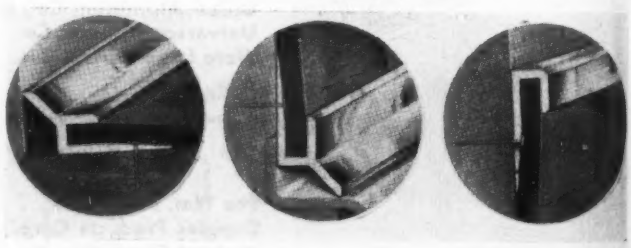
CORNER BEAD
8238.....1⅜ x 1⅜

Serves to protect corners of insulation boards, and insulation boards.

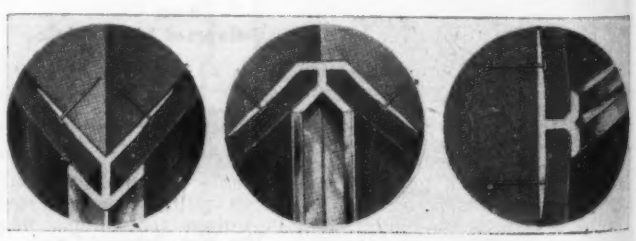
PICTURE MOULD
8263A.....¾ x 1⅜

Picture moulding is often used at the ceiling line of rooms.

METAL MOULDINGS



COVE TRIMS CAP TRIMS



OUTSIDE CORNERS INSIDE CORNERS WALL PANEL TRIMS

Metal Mouldings: Metal mouldings, made of aluminum, stainless steel, nickel, etc. provide the most efficient and attractive method of jointing prefinished hardboard, plastic laminates, linoleum, and similar products on walls, ceilings, counter tops, etc.

A wide range of shapes, depending on where the joint occurs, is available. Typical, examples of these are shown above. For further details see Section 14, Kitchen, Laundry, and Bathroom.

You can build a lot more house at a lot less cost...with

RUSCO *Fully Pre-Assembled* WINDOWS and DOORS

Revolutionary new RUSCO Hot-dipped Galvanized Steel Prime Window

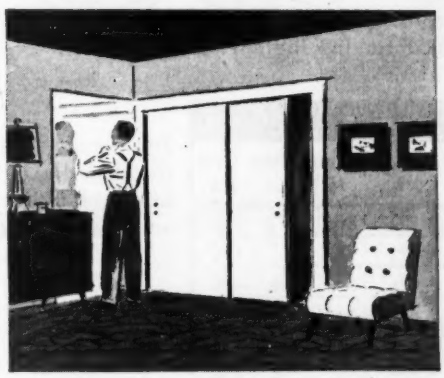
GLASS
RUSTPROOF LUMITE SCREEN
FELT WEATHERSTRIPPING
INSULATING SASH*
FITTED HARDWARE
WOOD OR METAL CASING

All in one unit!

*Optional

Fully-Assembled, Factory-Painted Ready to Install!

The world's first complete window "package." Comes fully-glazed, fully-fitted, factory finished with baked-on outdoor aluminum enamel—all ready to place in the stud openings. Leading builders in every part of the country acclaim its *big savings* in installation time and labor. Compare its *installed cost* with that of the cheapest window you can buy!



RUSCO Noiseless Sliding Wardrobe Door Unit

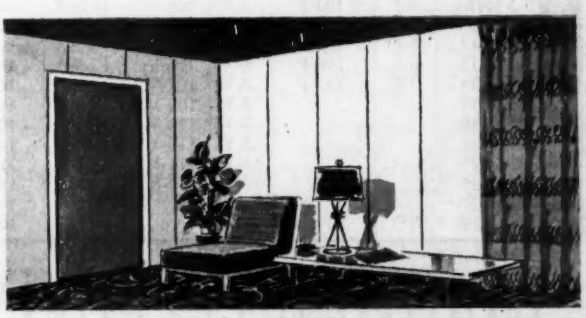
Hollow core construction with Masonite Duolox faces. Stiles, rails, lock-block, side jambs and casings of kiln-dried white fir. Sill is clear, kiln-dried oak. Hardware applied. Simplifies closet placement and saves floor space.

RUSCO Combination Self-Storing All-Steel Screen and Storm Door

Self-storing feature eliminates need for changing screen and glass panels. Lower glass raises for ventilation. Removable panels permit changing to all-glass or all-screen if desired. Sturdy, beautiful.

RUSCO Flush-Fitting Hollow Core Door

Available in both interior and exterior types. F.H.A. approved. Enhances and modernizes any room. Adaptable to all types of construction. Masonite Duolox faces excellent for painting.



RUSCO Interior Panel Wall Sections

The last word in simple, low-cost construction. Hollow core construction. Sound resistant, water-resistant, inert. Smooth Masonite Hardboard finish ideal for painting. Edges grooved and splined for quick installation. F.H.A. approved.

For Illustrated Literature and Full Specifications, write Dept. 7 AL 42

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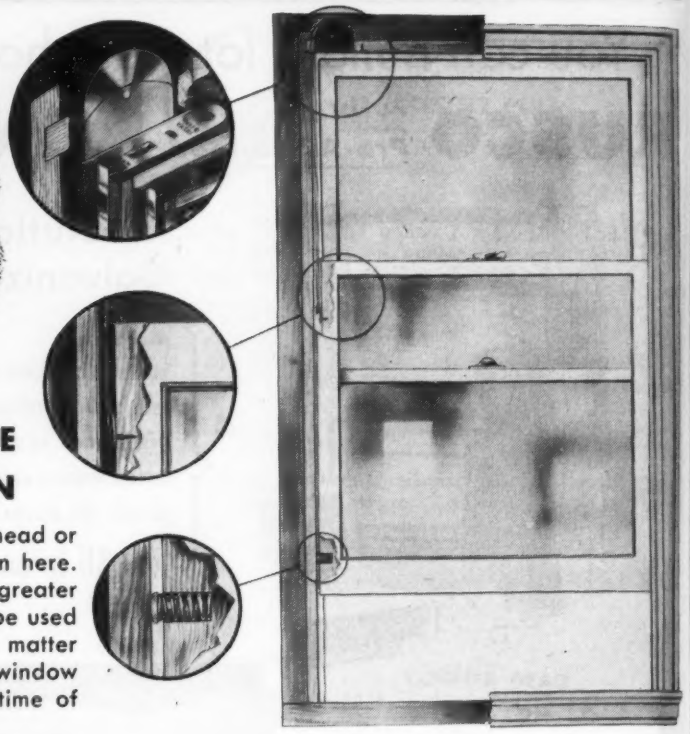
World's Largest Manufacturer of All-Metal Combination Windows

Better Windows at Lower Cost!



GUARANTEED LIFETIME TROUBLE-FREE OPERATION

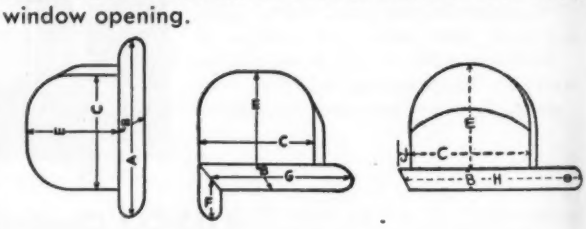
You get true counterbalancing operation with Pullman Overhead or Side Type Unit Sash Balances. Overhead Type VX is shown here. Normal installation requires 4 Balances per window. For greater economy, however, one-balance-per-sash installation may be used when sash is less than 32" wide (see illustration). But no matter which type of installation you use, you're sure of effortless window operation—with Pullman Balances guaranteed for the lifetime of the building in which they are installed.

SPECIFICATIONS

Dimensions	Unit V			Unit F	Unit A	Unit L	Unit M	Unit AA	Unit LA
	VX	V-Top	V-Side						
A	4⅞"	4½"	6"	4½"	6"	7⅞"	8¾"	6"	7⅞"
B	1"	1"	1"	1"	1"	1⅜"	1¾"	1"	1⅜"
C	3"	3"	3"	2½"	3⅜"	4⅜"	5⅜"	3⅝"	4⅝"
E	3"	3"	3"	2⅝"	3⅜"	4⅜"	5⅜"	3¾"	4⅜"
F	.....	1½"	3"	1⅜"	1⅜"	1½"	1½"	1⅜"	1⅜"
G	.....	.....	.....	3⅜"	4⅜"	5⅞"	7¼"	4⅜"	6⅛"
H	4⅞"	.....	.....	.....	.....	.....	.....	.....	.....
J	⅜"	.....	.....	.....	.....	.....	.....	.....	.....
Tape Length	46"	46"	46"	40"	46"	54"	60"	46"	54"

DIMENSIONS

The keyed drawings below indicate dimensions as listed under all units. Length of tape as listed under each unit indicates extreme run or travel of sash within window opening.



SIDE TYPE OVERHEAD TYPE OVERHEAD-X

BALANCE SELECTION BY SASH WEIGHT

Pullman Balances are specified on the basis of the sash to be hung, according to the schedule below. Total sash travel is controlled by tape length which is specified above under each unit.

WEIGHT OF EACH SASH (LBS.)	UNIT F		UNIT V		UNIT A		UNIT A-A	
	Side Type	Overhead Type "X"	Side Type	Overhead Type	Side Type	Overhead Type	Side Type	Overhead Type
4 to 5	2-F	102-F	2-V	102-V(X)	2-A	102-A	2-AA	102-AA
5 to 7	3-F	103-F	3-V	103-V	3-A	103-A	3-AA	103-AA
7 to 9	4-F	104-F	4-V	104-V	4-A	104-A	4-AA	104-AA
9 to 11	5-F	105-F	5-V	105-V	5-A	105-A	5-AA	105-AA
11 to 13	6-F	106-F	6-V	106-V	6-A	106-A	6-AA	106-AA
13 to 15	7-F	107-F	7-V	107-V	7-A	107-A	7-AA	107-AA
15 to 17	.....	.....	8-V	108-V	8-A	108-A	8-AA	108-AA
17 to 19	.....	.....	9-V	109-V	9-A	109-A	9-AA	109-AA
19 to 21	.....	.....	10-V	110-V	10-A	110-A	10-AA	110-AA
21 to 23	.....	.....	11-V	111-V	11-A	111-A	11-AA	111-AA
23 to 25	.....	.....	12-V	112-V	12-A	112-A	12-AA	112-AA
25 to 27	.....	.....	.....	.....	13-A	113-A	13-AA	113-AA
27 to 29	.....	.....	.....	.....	14-A	114-A	14-AA	114-AA

WEIGHT OF EACH SASH (LBS.)	UNIT L		UNIT L-A		UNIT M	
	Side Type	Overhead Type	Side Type	Overhead Type	Side Type	Overhead Type
8-L	108-L	8-LA	108-LA	.....	.....	
9-L	109-L	9-LA	109-LA	.....	.....	
10-L	110-L	10-LA	110-LA	.....	.....	
11-L	111-L	11-LA	111-LA	.....	.....	
12-L	112-L	12-LA	112-LA	.....	.....	
30 to 32	13-L	113-L	13-LA	113-LA	.....	.....
33 to 35	14-L	114-L	14-LA	114-LA	14-M	114-M
36 to 38	15-L	115-L	15-LA	115-LA	15-M	115-M
39 to 41	16-L	116-L	16-LA	116-LA	16-M	116-M
42 to 44	17-L	117-L	17-LA	117-LA	17-M	117-M
45 to 48	18-L	118-L	18-LA	118-LA	19-M	119-M
49 to 51	19-L	119-L	19-LA	119-LA	21-M	121-M
52 to 54	.....	.....	.....	.....	21-M	121-M
54 to 56	.....	.....	.....	.....	23-M	123-M
57 to 60	.....	.....	.....	.....	25-M	125-M
61 to 64	.....	.....	.....	.....	27-M	127-M
65 to 68	.....	.....	.....	.....	29-M	129-M
69 to 72	.....	.....	.....	.....	31-M	131-M
73 to 76	.....	.....	.....	.....	33-M	133-M
77 to 80	.....	.....	.....	.....	35-M	135-M
81 to 84	.....	.....	.....	.....	37-M	137-M
85 to 88	.....	.....	.....	.....	39-M	139-M
89 to 92	.....	.....	.....	.....	41-M	141-M
93 to 96	.....	.....	.....	.....	43-M	143-M
97 to 100	.....	.....	.....	.....	45-M	145-M
101 to 105	.....	.....	.....	.....	.....	.....

PULLMAN *Sash Balances*

PULLMAN MANUFACTURING CORPORATION
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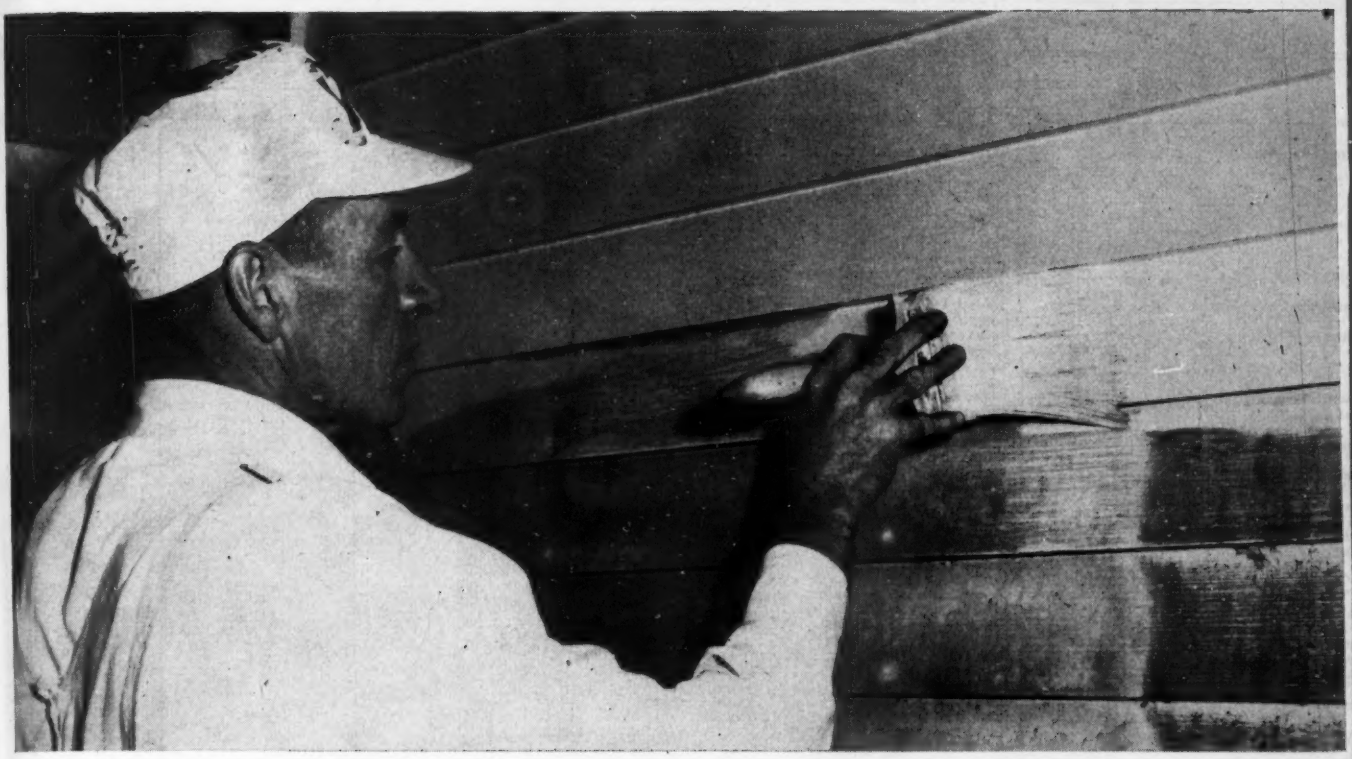
WRITE FOR FULL DETAILS



Section 5 Paint and Wallpaper

There are many types of paint products on the market today, all designed to do a particular job or series of jobs. There are paints for inside and outside wood coverage, cement paints, metallic paints, calcimine paints, water resistant paints, lacquers, varnishes, stains, and many others.

The most familiar, of course, are the oil base products that are a combination of a metallic pigment and linseed oil. The old established formula of white lead and linseed still forms the basis of many paint formulas, although in recent years other metallic carriers besides lead have been introduced with outstanding success.

Research and engineering have developed improvements in all paint products. Outside paints are more resistant to weather than ever before. They maintain their color longer and their protective qualities are greater. Inside paints have improved covering qualities, and "one-coat" products have been introduced that eliminate the necessity of multiple coverage.

Basically, all oil paints begin with white and are colored to desired shades by the thorough blending of oil pigments. These pigments are supplied in tubes in raw colors so that the consumer may now mix whatever shade he desires by adding them to white.

The difference between outside, inside, dull-finish, semi-gloss, and gloss finishes is largely a matter of formula, all falling into the broad classification of oil base products. Each is specially compounded to provide the desired finish and manufacturers do not recommend that different types be mixed for any application.

Lacquers are a comparatively new addition to the paint field, particularly for home use. These vary from oil base products in that the oil used is essentially a liquid plastic that dries and hardens quickly after application and usually with an extremely high gloss. The use of lacquers, therefore, is not as broad as oil base paints, but for its recommended applications it is indeed a most satisfactory addition to the paint field.

The oil resin paste products have proved quite popular, as have the special calcimine products. These are supplied in paste form and are reduced to the proper consistency for application by the addition of water. These products serve a wide variety of recommended uses from covering old wallpaper to providing a water resistant surface to both inside and outside masonry walls.

Stains and varnishes have as their primary uses the finish of furniture and woodwork, although a unique line of stains in revolutionary new shades has been developed especially for roofing and siding shingles. These new shades introduce pleasing tones of gray, blue, and green that enhance the appearance of shingle surfaces.

For metal surfaces, in addition to the oil base paints, aluminum and chromate products are available. These may be used either as a prime coat or as a protective covering to prevent corrosion. As a practical covering they have found wide application for exposed metal surfaces both in homes and farm buildings.

In the general classification of paint products must also be included turpentine, thinners, solvents, paint removers, etc. While these products differ widely in formula and use, they are closely allied with other paint products, and no paint department would be complete without them.

The same may be said of brushes, for in most cases, at least where the application is done by the consumer, a brush is a necessary tool without which the paint cannot be applied. The brush display, as well as the stock of allied products mentioned above, should be arranged as an integral part of the paint department.

Exterior House Paint: Paints designed especially for use on exterior wood surfaces usually contain white lead and zinc oxide. These pigments may range in proportion from equal parts; or the amount of zinc may vary from 10% to equal. In a good paint, however, the two together should make up about 85% of the total pigment content in white and light colored paints; less in the darker shades.

The pigment in exterior house paints should amount to 60% to 65% of its total weight. The liquid vehicle is us-

Table of covering capacities

Material	Kind of surface	Covering capacity per gallon		
		Primer, or 1st coat	2d coat	3d coat
Exterior paint	Plain siding and trim	468 sq. ft.	540 sq. ft.	630 sq. ft.
" "	Exterior trim	850 " "	900 " "	972 " "
" "	Porch floors and steps	378 " "	504 " "	576 " "
" "	Shingle siding (not including trim)	342 " "	423 " "	
" "	Shingle roofs	150 " "	250 " "	
" "	Picket fences (average type)	650 " "	675 " "	675 " "
" "	Plain fences (average type)	468 " "	540 " "	630 " "
" "	Brick	200 " "	400 " "	420 " "
Stain	Shingle siding (not including trim)	150 " "	225 " "	
"	Shingle roofs	120 " "	200 " "	
Waterproof cement paint	Smooth face brick	100 " "	150 " "	
" " "	Smooth cement walls	120 " "	162 " "	
Exterior paint	Sheet metal (flat)	550 " "	600 " "	
" "	Corrugated metal[1]			
" "	Steel sash	981 " "	1,000 " "	1,350 " "
Interior oil paint	Doors and windows	603 " "	495 " "	540 " "
Flat finish	Smooth plaster	720 " "	630 " "	700 " "
" "	Sand-finish plaster	297 " "	450 " "	486 " "
Gloss or semigloss	Smooth plaster	720 " "	540 " "	540 " "
" " "	Sand-finish plaster	297 " "	395 " "	450 " "
Glazing and mottling	Smooth plaster	1,080 " "		
" " "	Sand-finish plaster	900 " "		
Water size	Plaster	720 " "		
Oil size	Plaster	720 " "		
Calcimine	Plaster (sized)	240 " "		
Casein paint	Over-painted surface	423 " "		
" "	Smooth plaster	540 " "	700 " "	
" "	Sand-finish plaster	356 " "		
" "	Cement or concrete block	333 " "		
Staintill	Floors	505 " "		
Shellac	Floors	680 " "		
Varnish	Floors	540 " "	540 " "	
Wax and polish	Floors (over shellac)	1,080 " "		
Floor sealer	Floors (maple and pine)	630 " "	1,260 " "	
" "	Floors (oak)	720 " "	1,260 " "	
Enamel	Doors and windows	603 " "	405 " "	504 " "
"	Picture molding, chair rail (up to 6" wide)	1,200 lin. ft.	810 lin. ft.	810 lin. ft.
Interior oil paint	" " " " " "	1,200 " "	900 " "	900 " "
" " "	Floors	540 sq. ft.	450 sq. ft.	

[1] Same as for sheet metal, but add 9 percent to flat area.

ually pure raw linseed oil, with from 5% to 10% of drier.

Volatile thinners such as petroleum spirits, turpentine, etc. should not amount to more than 10% of the content of the liquid vehicle. Paints with mineral, fish, rosin oils are of inferior quality.

Flat Wall Paint: The pigment base commonly used in flat wall paints is lithopone alone, or combined with zinc oxide, comprising about 60% of the total weight of the paint.

The liquid carrier, or vehicle, should contain approximately 1/3 non-volatile material, varnish or tung oil and drier. The other 2/3 should be made up of turpentine, benzine, petroleum spirits, etc. The drier should comprise about 10% of the total ingredients.

The pigment content of the "one-coat" flat wall paints is somewhat greater than in those described in the preceeding paragraphs.

Gloss and Semi-Gloss Paints: These are similar in composition to the exterior house paints. Because they are not subjected to the same conditions of heat and cold, wet and dry, however, they do not necessarily have to conform to the same high standards.

Interior white paints should contain refined linseed oil and a pure Japan drier. These ingredients reduce the tendency of white paint to turn yellow.

Enamel: Enamels are designed for interior surface finishing. Their pigments are usually a mixture of lithopone or zinc oxide with varnish. A high quality varnish is important, as inferior varnishes when mixed with pigments tend to solidify or "jell."

It is advisable to use an enamel undercoat on new, raw surfaces; and especially one that is designed primarily as an undercoating for enamel. These contain opaque pigments and provide a flat finish particularly suited for the application of enamel.

Varnishes: Varnishes are divided into two main classes: spirit varnishes, and oleoresinous varnishes. Spirit types are made of resins dissolved in some quickly evaporating liquid such as turpentine or alcohol. Examples are Japan, dammar, and shellac varnishes, and pyroxylin lacquers.

Oleoresinous varnishes are made of cooked mixtures of resins and drying oils disssolved in turpentine or petroleum spirits. An example is spar varnish, named so because of its ability to withstand weather and water.

Spirit varnishes dry because of the evaporation of the solvent. Oleoresinous varnishes dry by two means; the evaporation of the solvent, and the hardening of the resin-oil mixture when it combines with the oxygen in the air.

Shellac: Is the liquid formed of resin flakes which have been dissolved in alcohol. The flakes are the dried form of a sticky substance called lac resin. When applied to a surface, the alcohol evaporates, leaving a shiny, tough resin coating.

Shellac resin flakes are orange, yellow, or reddish, but they can be bleached white.

Stain: Is a special type of dye used to bring out the grain in wood. Stains are named according to the type of solvent that is used to dissolve the dye. Water, oil, and alcohol are the chief solvents used. Alcohol is considered the best solvent for wood stain because it does not cause the grain to raise. Oil penetrates deeply and produces a lustrous finish, but unless care is taken, it may smear or "bleed" into coats of varnish applied over it.

Lacquer: Lacquers are made from compounds of cellulose, resin, or lac. Those made with resin are a true spirit varnish. (See Varnish.) When a cellulose compound is used, the compound is usually dissolved in butyl alcohol or butyl acetate. The butyl compounds also evaporate when exposed to air.

When lac is used, the evaporating solution is usually ethyl alcohol. All lacquers are made in the full range of colors that are found in paint.

Water Paint: These are made in three types; casein, calcimine, and resin emulsion. All three use a lime compound (calcium sulphate or calcium carbonate) as a base. They also contain an adhesive ingredient that acts as a binder.

Rubberized Paint: These newly developed paints contain synthetic latex with special resin chemicals that produce a velvet-like finish of remarkable durability. They require no primers or sealers over most surfaces. Rubberized paint dries quickly and there is no "painty" odor. They are extremely easy to clean.

Concrete and Cement Paints: These are special flat finish paints. Heat treated drying oils or varnish gums are necessary in the liquid vehicle to give the paint high water resistant properties.

Roof Paints: These are bituminous products, using coal tar, pitch, or asphalt, mixed with mineral fillers. Drying oils, gums, resins, etc. are added.

SALES DOUBLED...

WITH LESS INVENTORY*

STYLE GUIDES and COMPANIONS Started Paint Sales Boom

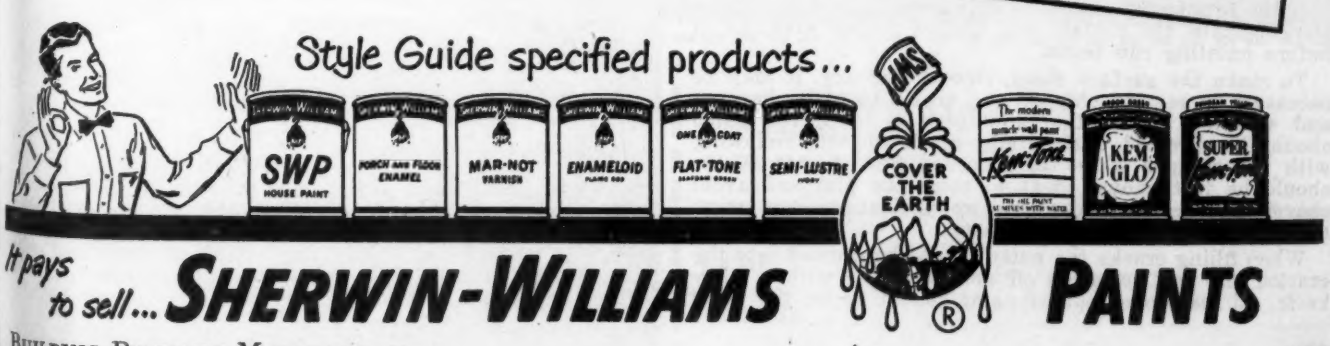
AT CRAVER'S IN LEXINGTON, N. C.

Craver's Paint and Wall Paper Store checks sales results on every Style Guide lending. Total sales of $7,860 were directly traceable to Style Guide lendings in 1951. This is just one example of the selling action thousands of Sherwin-Williams Style Guide Dealers are getting. They find the Style Guide *in use* gives them a big and exclusive advantage.

Your Sherwin-Williams representative can show you how to put this advantage to work for your store; or write The Sherwin-Williams Co., Cleveland 1, Ohio.

***R. B. CRAVER**
of Lexington, N. C.
SAYS:

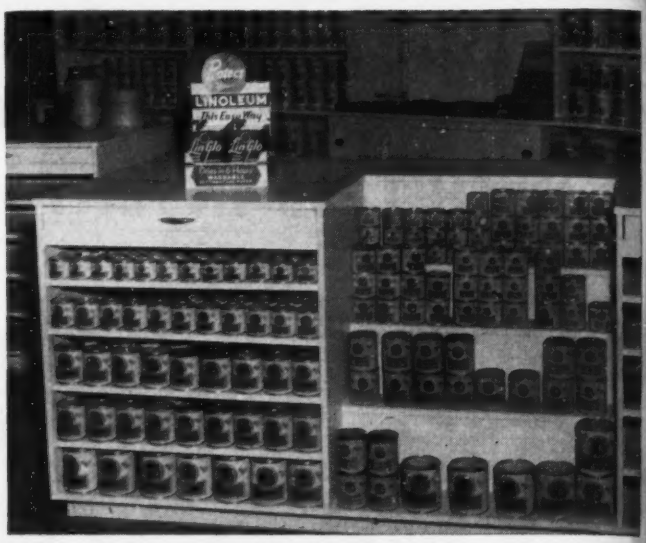
- Our 1951 paint sales increased more than 100% over 1950 while our inventory averaged considerably less than the previous year's amount. The Style Guides and Companions on steady loan were the main reasons for this.
- We consider your national magazine and branch city newspaper advertising as exceptionally effective sales helps to us.
- We take full advantage of your fine radio and newspaper co-operative advertising plan.
- We concentrate on Sherwin-Williams products and enjoy excellent consumer and painting contractor relationships.



It pays to sell... **SHERWIN-WILLIAMS PAINTS**

BUILDING PRODUCTS MERCHANDISER

PAINT MANUFACTURERS have developed a wide range of point of sale material, designed to help the salesman explain the products and colors, and how they are used in home decoration, maintenance, and improvement.



PAINT DISPLAYS are usually built around the packages themselves. They may be wall shelves or islands. Most important is to make the exhibits clearly visible and available to the customer. Color charts, posters, and illustrations add greatly to the display.

CHOOSING THE COLOR

Color is just as important in the sale of paint as design is in the sale of automobiles. The dealer or clerk who knows how to use colors can outsell his competitor who doesn't, three to one. Paint manufacturers include among their dealer helps, color charts, wheels and color chips, as well as suggested decorative schemes for interior and exterior painting.

Houses that appear too tall can be lowered through the use of a darker color on the roof or upper shutters. A house with too many gables should have all areas painted the same color with emphasis on the front door or first floor shutters. Dormers on a small house should be painted the color of the house, while those on a large house should be painted to blend with the roof. It is usually best to paint chimneys the color of the house. When there are windows of various sizes and shapes, paint them to match, rather than contrast with the house.

Light colors in general make things appear larger and dark colors make them seem smaller and less conspicuous. Where trim is heavy and ornate, paint body and trim alike.

In the interior, a square room can be given more interest by painting one wall a different color or value. This is usually the fireplace wall, a window wall or a wall opposite a window. Long and narrow rooms can be foreshortened by painting the end walls darker than the long side walls. When the room is too high, paint the ceiling darker than the walls, and if too low, paint it lighter.

Light colors make the room seem larger and dark colors make it seem smaller. When walls and woodwork are painted the same color the rooms will have a more spacious effect.

Warm colors, such as ivory, yellow, peach, rose, tan and beige should be used in rooms receiving cool lights, usually northern and eastern rooms. The cool colors, such as gray, blue green and green, are used in southern and western exposures where warm light is received.

PREPARING TO PAINT

If the former job was done with poor paint and/or poor workmanship, the surface will require proper preparation before painting can begin.

To make the surface clean, smooth and dry, it may be necessary to remove chipped and peeled paint by burning and scraping. When the blow-torch is used, the flame should be directed horizontally or downward, following with the scraper while the loosened film is soft. There should be just enough heat to raise the film and avoid charring or setting fire to the wood. Extreme care must be used on account of fire hazard.

When filling cracks the putty should be pressed into the cracks, and nail holes cut off and smoothed with a putty knife. At least one coat of paint should be on the wood and dry before putty is used. Closing and sealing of large cracks can be done with a caulking compound forced into the crevice with a pressure-gun.

Sometimes the surface can be smoothed and blemishes removed with a wire brush, sandpaper or steel wool.

Masking Tape

Pressure-sensitive masking tape, now on the market in a wide range of widths and roll sizes, is being used more and more by both professional and amateur painters for certain painting jobs. These jobs may include edging for straight-line painting; separating colors on two-toned walls holding paper masks over woodwork and floors to protect such surfaces from paint splatter; or for masking glass and hardware prior to painting surrounding areas. Use of the tape also assures the user top performance for most painting operations, plus a substantial reduction in application time.

Features of the tape include "stick-at-a-touch" adhesion, resistance to moisture, flexibility and conformability, thinness, and ease of removal. It comes in a ¾-inch width on a 30- or 90-foot home-sized roll, or in ¼- to 4-inch widths on a 60-yard professional-sized roll.

Painting Plaster

Plaster surfaces should be examined for construction faults before the paint is applied, and danger of water leaks should be eliminated.

If plaster has been applied directly on tile, brick or cement construction, the surface should be examined for signs of efflorescence. When this condition exists, the affected area should be replastered, or a lathing or waterproofing used on the tile. A zinc sulphate solution should not be used on plaster.

Damp plaster walls can now be painted safely by selecting the proper paint materials. Glue and varnish sizes should be avoided. To insure against blistering and peeling, select oil base rather than varnish base paints.

And always follow detailed directions for use of paints.

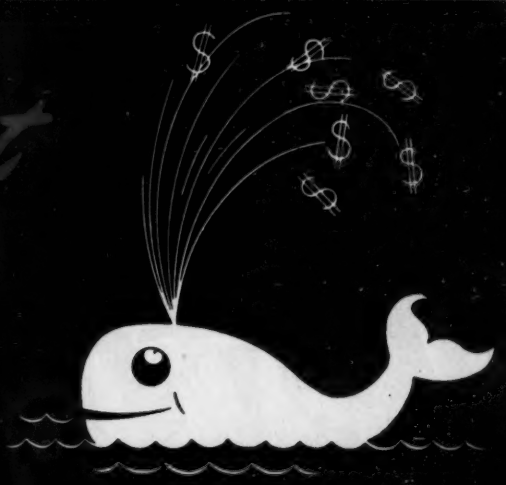
For specific paint jobs, such as flooring, roofing, farm buildings, etc., best results are obtained by following directions given by the manufacturer. If special problems arise, paint manufacturers will be glad to give more specific and detailed instructions.

APPLICATION COUNSEL

Preparation and Application

Clean, smooth and dry are the primary requirements of the surface to be painted. Most new window and door frames and trim should be primed to specifications at the mill if possible, and only raw edges and exposed ends need to be primed on the job. Siding, flooring and exposed timbers should be given a first coat as soon as possible

A Whale of a Paint for Profit!



PATTERSON - SARGENT

FLATLUX

The Made-With-Oil Wall Paint that Puts Extra Cash in Your Pockets!

Year after year, exclusive-Franchise BPS Dealers everywhere have been making a mint of money with dependable, *made-with-oil* Flatlux, the wall paint that tops them all for profit and performance. Now, with sensational new, *made-with-oil* Flatlux Regal Colors at their command in luxurious deep tones, they're set to make even more. Don't stand in your own way! Step right up and put your name on the line . . . the one and only BPS line . . . that means more customers and more profits for you.

Identically Matched Colors

Capture your local single-color style market with BPS Satin-Lux and BPS Glos-Lux. Color-matched to Flatlux, they sell faster on a "one sale gets you two, two can get you three" basis!

Never Before Such High Fashion . . . High Profit Colors for Low Cost Styling!

THE PATTERSON-SARGENT CO.
MAKERS OF

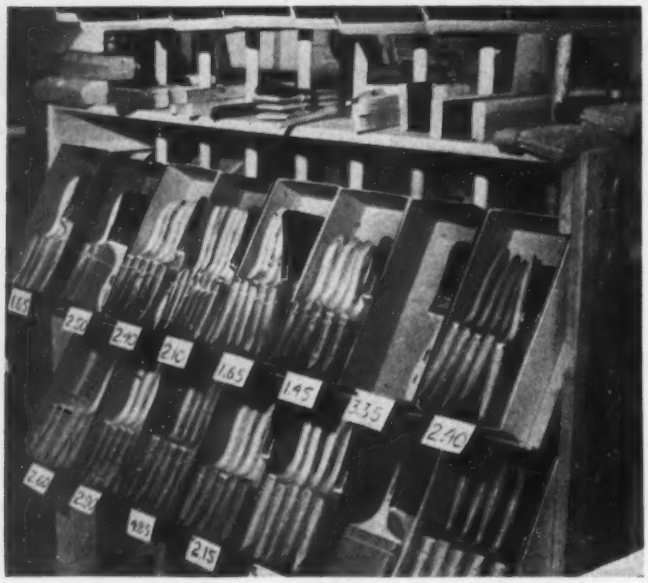
The Patterson-Sargent Company,
1325 East 38th Street,
Cleveland 14, Ohio

I'd like to know more about the BPS Line and its profit advantages.

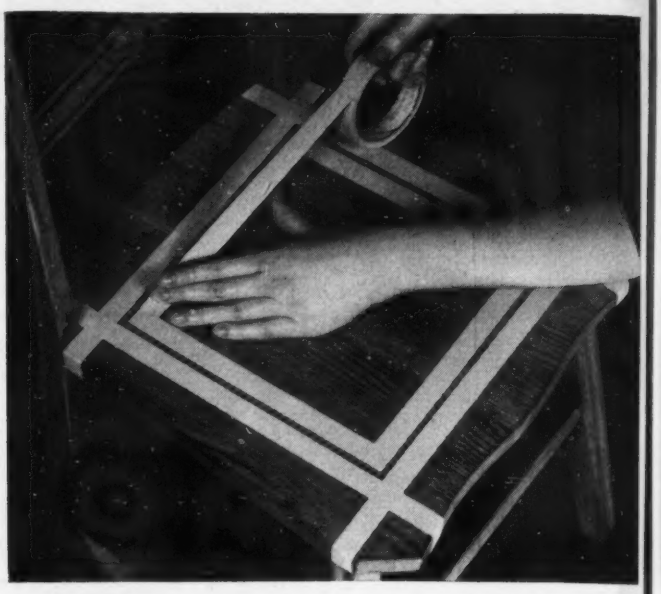
NAME_____

ADDRESS_____

CITY_____ **STATE**_____



NOTE the orderly and attractive way that brushes are displayed in the above rack.



MASKING TAPE is now widely used by both the professional and amateur painter.

to prevent absorption of moisture. Knots, pitch pockets and sap streaks should be covered with orange or white shellac or aluminum paint before the prime coat is applied.

Nail holes, cracks and joints should be filled and smoothed with putty, and dirt and sawdust removed. Rough spots should be smoothed with sandpaper and dusted. Crevices, especially found at door and window frames, should be filled with plastic caulking compound applied with a pressure-gun.

Metal Surfaces

Should be swept clean of dust, wire-brushed to remove scale, loose paint and other foreign deposits, and washed with a solvent to remove grease and oils. Steel surfaces can be cleaned quickly with a flame burner or torch, or by sandblasting.

Concrete Surfaces

Brush off all dust and loose aggregate. If concrete is disintegrating due to chemical reactions, clean off surface and wash with clean water. Allow surfaces to dry before applying coatings.

New Concrete Floors and Walls

Before painting wash the surface with a zinc sulphate solution—2 pounds of Zinc Sulphate to a gallon of hot water—allow to dry and then sweep off the surface before applying.

Galvanized Iron Surfaces

Before painting new galvanized iron surfaces, wash with acetic acid or vinegar. (Commercial acetic acid 28 percent) should be diluted four parts water to one part acid. For best results allow new galvanized surfaces to weather for approximately four to six months before painting.

For a perfect paint job, two or three coats of paint should be applied in accordance with the manufacturer's directions.

for repainting, avoiding the expense of extensive preparatory work. Often a thorough cleaning is all that is necessary.

SUGGESTIONS FOR NON-PROFESSIONAL PAINTERS

For promotion of better painting results by so-called amateur painters—"most of whom can turn out a mighty neat performance if they try"—the Canadian Paint, Varnish and Lacquer association has issued 14 rules. Some of these, it is commented, may be new, but most of them are long established and fundamental. All are simple and it is suggested that they be reviewed and observed when a paint job is to be done.

The 14 rules are as follows:

1. Use a good quality paint. If the job is worth spending time on, it deserves a paint that will give best results.

2. Stir the paint thoroughly before using. Everybody knows that should be done, but plenty of people still are inclined to skimp on the stirring.

3. Be sure that the surface to be painted is absolutely free from dirt, oil or grease—and of course make sure it is dry.

4. Follow the directions on the can—the manufacturer really knows best how his product should be used. He has spent a lot of time and money to find out.

5. When, or if, paint needs thinning, thin it sparingly—with turpentine. Don't try thinning with linseed oil. The paint may go farther if you do, but it won't stand up as well because the careful balance between oils and pigments has been upset.

6. Use a good quality brush. It pays off in a better paint job.

7. If it is a new brush, give it a 24-hour soaking in linseed oil before putting it in the paint.

8. Use a sensible size of brush. Don't try to do a wall with a little brush, and don't try to do fine work, or get into tight corners, with a big brush.

9. Allow plenty of time between coats. Not just enough time so that the paint is no longer tacky, but enough time so that it has dried hard and firm.

10. Do your painting when the air is warm and dry for best results. In interior painting, make sure that there is plenty of air circulating.

11. In choosing paint colors from color chips in paint dealers' stores, remember that the color of the finished job will be somewhat deeper than that of the color chip, because the color has been applied to a greater area.

12. If the surface hasn't been painted before, use a good primer sealer undercoating for the first coat.

13. Two thin coats are always better than one thick one.

14. Remember the simple rules of color—that blues, greens and allied tints are cool colors and that yellows and orange shades are warm; that light colors in a room give an impression of greater spaciousness and darker shades do the opposite.

BRUSHES AND APPLICATORS

Brushes: There are many types of brushes on the market. Few people, except professional painters, understand the various types and their uses, although use of the right brushes would in many cases simplify the home painting jobs they undertake for themselves.

For example a flat brush 3½" or 4" wide is proper for the painting of large flat surfaces. For trimming or covering small surfaces either a 2" or 2½" flat brush; or an oval sash brush 1½" wide should be used.

Oval brushes are also better for the application of paint on rounded surfaces, and softer textured brushes should be used to apply varnish and enamels.

Brushes are supplied in many qualities that range in price from very cheap to expensive. For satisfactory results in all painting jobs, however, the quality of the brush is important.

"COLOR DYNAMICS is the best sales aid in paint business!"

—writes veteran Pittsburgh Paint dealer in Virginia Beach, Va.

FUEL, FEED and BUILDING SUPPLIES CORP. ESTABLISHED 1927

RETAIL STORE - 17th ST. PHONE 564 ★ WAREHOUSE - 19th ST. and RAILROAD PHONE 560 ★ APPLIANCES - 19th and ARCTIC PHONE 560

J. M. JORDAN, JR., PRESIDENT ★★★★ R. B. TAYLOR, VICE PRESIDENT - SECRETARY - TREASURER

★★★

BUILDING MATERIALS

217 SEVENTEENTH STREET
VIRGINIA BEACH, VIRGINIA

Mr. J. H. Spivey, Manager
Pittsburgh Plate Glass Company
Richmond, Va.

Att: Mr. J. W. Alston, Jr., Paint Manager

Dear Mr. Alston:

We have been selling Pittsburgh Paints for the past twenty years and during that time have had reason to be proud of the performance of these products. We have scores of customers who have been buying Pittsburgh Paints from the first day we stocked them. This, we believe, is evidence that they must be satisfied.

COLOR DYNAMICS is, in our opinion, the best sales aid in the paint business. It has been of untold benefit to us in selling paint because it eliminates all doubt of proper color selection by the purchaser. It offers an authentic guide instead of guesswork to the home-owner who is planning to do over his entire dwelling or to the house-wife who wants to redecorate a single room. COLOR DYNAMICS gives us the opportunity of presenting paint colors to a prospective buyer in a most attractive manner.

We feel we can safely say that in looking back over the past twenty years in which we have been selling paints that the Pittsburgh line tops them all.

Thanking you for all your past cooperation and with kind personal regards, we are,

Sincerely,

FUEL, FEED & BUILDING SUPPLIES CORP.

By R B Taylor

Vice-President

R. B. TAYLOR, *Vice-President, Fuel, Feed & Building Supplies Corp.*

DEALERS who sell Pittsburgh Paints are enjoying greater sales than ever before.

● **There's good reason** for this increase in volume and profits—the *big swing* to Pittsburgh Paints among home-owners who are being convinced that they paint *right* with COLOR DYNAMICS and paint *best* with Pittsburgh Paints!

● **No other paint** manufacturer can match the benefits in performance and service which Pittsburgh's scientific painting system and *live-paint protection* give to home-owners and dealers alike.

● **Now is the time to cash in** on the advertising and merchandising which is causing the demand for Pittsburgh Paints to rise to new records everywhere. Write, wire or phone today. We'll gladly have a representative call to discuss the possibility of you selling Pittsburgh Paints in your community. Pittsburgh Plate Glass Company, Paint Division, PO-551, Pittsburgh 22, Pa.

PG

PITTSBURGH PAINTS

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

For many years high quality brushes have been manufactured from carefully selected China bristles. Cheaper brushes were made from the seconds or culls that were discarded in the manufacture of the better types. The best brushes also were set in rubber or similar composition, a feature not usually found in cheap brushes.

In addition to bristles, nylon is now being used extensively in the manufacture of quality brushes. The material has proved its ability to hold and distribute paint most efficiently.

Horsehair, domestic bristles, vegetable fibres, etc. are also used for brushes, but their quality is not as good as those described above.

Applicators: In addition to brushes, there are a number of other applicators available. Most common of these is the roller, with a rubber, felt, or similar covering. These are particularly efficient when used to apply water base paints, but they are also entirely suitable for certain oil paint applications.

Other types are pads and stubs, designed to give special effects.

Sprayers: Paint sprayers in a wide range are also on the market. These are gaining increasing favor for certain painting jobs because they substantially reduce the application time involved. Most sprayers are actuated by air under compression, and therefore have a compressor as an integral part of the sprayer assembly. There are, however, small sprays available that work on a vibrator principle, and need only to be plugged into an electric circuit to operate. These are designed especially for small paint jobs around a home.

Care of Brushes: A quality brush, if properly cared for, should last a long time. Manufacturers of quality brushes have printed instructions on the care and maintenance of their products. Briefly—here are the main rules:

First, after using, all surplus paint should be worked out of the brush onto a newspaper. The brush should then be suspended is a mixture of raw linseed and turpentine or other thinner, in the ratio of two parts oil to one part of thinner. Before reusing, the brush should be rinsed in turpentine and dried.

If the brush has been used to apply varnish or enamel, the mixture of oil and thinner should be equal. Shellac is cleaned from brushes with denatured alcohol. Lacquer thinner is used to clean brushes that have been used to apply lacquer.

Water paint is cleaned from a brush by washing it thoroughly in soap and water.

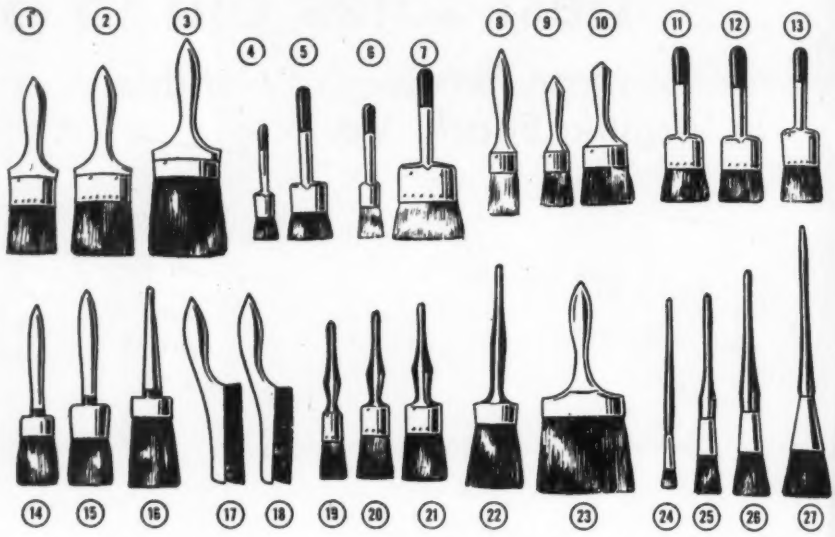
PAINTING TECHNIQUE

When painting, a free easy stroke should be cultivated, since short, jerky strokes result in an uneven surface, and too long a stroke gives an uneven surface and wears out the brush. Paint should be applied with the ends of the bristles and the sides for an inch or two; if the sides only are used the paint is not applied satisfactorily and the brush is worn out more rapidly. Brushes should be reversed at frequent intervals so they will wear evenly on both sides.

Even good paint cannot do a good job unless the surface is properly prepared. When applied over a poorly prepared surface, the result is usually plenty of trouble.

A careful inspection of the surface to be painted will reveal what is needed to put the surface into paintable condition. If previous paint jobs have been well done, the surface will be gradually chalking. This film wears away evenly, remains intact, and provides a suitable film for repainting, avoiding the expense of extensive preparatory work. Often a thorough cleaning is all that is necessary.

TYPES OF PAINT BRUSHES AND THEIR USES



1, 2, and 3. Standard 2-, 3-, and 4-inch black china-bristle wall brushes for paint.

4 and 5. Standard 1- and 2½-inch fitch brushes for shellac, lacquers, and varnishes. Bristles are skunk and black china, single-thick.

6 and 7. Standard 1- and 4-inch pure badger brushes for varnish-flowing; triple-thick; full chisel.

8. Standard 1½-inch white Russian bristles for varnish-flowing and enameling; double-thick; full chisel.

9 and 10. Standard 1- and 3-inch camel's-hair bristles, used only for color coats on undercoatings for a varnish schedule on automobile.

11. Standard 3-inch boar bristles for shellac, lacquer, varnish, and enamel; double-thick; full chisel.

12 and 13. Standard 2-inch Siberian ox-hair bristles for shellac, lacquer, varnish, and enamel; single- and double-thick respectively; full chisel.

14, 15, and 16. Standard 2/0, 6/10, and 8/0 black china oval, painter's general-purpose paint and varnish brushes; brush (15) has tin bridle.

17 and 18. Standard ½- and 1-inch molding, scrubbing, or rubbing brushes for pumice and oil rubbing or for cleaning work.

19, 20, and 21. Standard 1-, 2-, and 3-inch black china-bristle, full-chisel, varnish-flowing household general-purpose brush.

22. Standard 2½-inch round painter's duster.

23. Standard 4-inch flat painter's brush.

24, 25, 26, and 27. Standard ½-, ¾-, 1-, and 1½-inch oval sash tools for painting window sash; black china bristles.

Materials—Tools—Supplies

Paints

House Paints, Exterior
Barn Paints
Stucco, Cement and Brick Paints
Metal Paints, Rust inhibitive
Galvanized Iron Primer
Roof Paints
Shingle Stains
Texture Paints
Linoleum Lacquer or Varnish
Screen Paint
Gloss Floor and Trim Varnish
Floor Seal Varnish
Flat Floor and Trim Varnish
Exterior Varnish
Flat Wall Paints
Gloss Wall Paints
Semi-Gloss Wall Paints
Pigmented Wall Primer and Sealer
Calcimine
Water Paints
Porch & Deck Enamel
Gloss Enamel
Eggshell Enamel
Floor Enamel
Exterior Enamel

Supplies

Caulking Compound, Gun Grade
Paint and Varnish Remover
Linseed Oil, Boiled
Turpentine
Alcohol, denatured
Flatting Oil, or Mixing Oil
Floor Oil
Oil Tinting Colors

You'll call Eagle-Picher Giant Paint Color Samples your best salesmen!

You'll be pleased with your customers' enthusiasm for the take-home offer of Eagle-Picher Giant Paint Color Samples. They just naturally respond to this *extra* home planning service—a practical decorating service that permits them to borrow Giant Paint Color Samples for use in their own homes.

Eagle-Picher Giant Paint Color Samples end the problem of paint color selection. Every sample is 14 x 19 inches—112 times bigger than the usual tiny paint chip. By arranging samples around the home, your customers can easily pick the right colors without guesswork.

You'll find that Giant Paint Color Samples really build your sales of Eagle-Picher Interior Paints. In addition to helping you sell more paint, this service, offered exclusively by Eagle-Picher dealers, makes friends of your customers . . . brings in new customers, too.

PRE-HARMONIZED *colors mean good business with Eagle-Picher Interior Paints*

When you examine the Eagle-Picher line of interior paints, you'll agree that they're natural sellers—with all the features you want for profitable paint business. Every Eagle-Picher color is pre-harmonized . . . in line with the latest accepted decorative trends. Every color is backed by 676,000 replies to a nation-wide survey. When you sell Eagle-Picher Interior Paints, you sell *today's most wanted colors. And remember, Eagle-Picher tells your customers to buy a good paint . . . employ a good painter.*

For the full Eagle-Picher story . . .

MAIL THIS COUPON TODAY!

EAGLE PICHER

Since 1843

THE EAGLE-PICHER COMPANY Cincinnati (1), Ohio

Paint and Varnish Division General Sales Office:
9107 West Ogden Ave., Brookfield, Ill.
Plants and warehouses: Lyons (Chicago), Ill.; New York, N. Y.; Oklahoma City, Oklahoma; Atlanta, Georgia

THE EAGLE-PICHER COMPANY, Dept. AL-452
9107 W. Ogden Avenue, Brookfield, Illinois

Please send full information on Giant Paint Color Samples and the Eagle-Picher line of pre-harmonized interior paints.

NAME_____

ADDRESS_____

CITY_____ **ZONE**___ **STATE**_____

Larger Sales!

WATERLOX PRODUCTS

Greater Profits!

WATERLOX

TRANSPARENT

A tung oil product which seals out moisture while producing a natural Finish on all woods which is as beautiful as it is durable!

WATERLOX

SATIN FINISH

A natural wood Finish with a wax-like luster, and satiny appearance. Its tung oil base adds toughness and ability to seal out moisture.

WATERLOX

Cement Floor Stain

Water Repellent

WATERLOX

DIVISION OF

The Empire Varnish Co.

2636 E. 76th St. Cleveland 4, Ohio

White Lead
Dry Colors
Patching Plaster
Crack Filler
Sizing Glue
Cabinet Glue
Wall Paint Cleaner
Wall Paper Cleaner
Sand Paper
Brush Cleaner
Wiping Rags
Masking Tape
Steel Wool
Putty
Oxalic Acid
Prepared Floor Bleaches
Pumice Stone
Whiting
Plaster Paris
Paste Wood Fillers
Oil Wood Stains
Glazing Liquid
Washing Powders
Glazing Points
Window Glass

Tools & Equipment

Flat Wall Paint Brushes
Sash & Trim Brushes
Enamel and Varnish Brushes
Duster Brushes
Calcimine and White Wash Brushes
Stencil Brushes
Paste Brushes
Smoothing Brushes, Wallpaper
Roller Stipplers
Putty Knives
Glazing Knives
Scraping Knives
Floor and Wood Scrapers
Glass Cutters
Sponges, Synthetic
Seam Rollers, canvas
Canvas Edge Trimmer
Window Screen Painting Tools
Paint Strainers
Step Ladders
Extension Planks
Caulking Guns
Drop Cloths
Overalls and Caps
Spachtling Compound

THE WALLPAPER DEPARTMENT

Wallpaper is strictly a decorative item. It is used exclusively as an interior wall finishing material. While a small percentage of the customers apply wallpaper themselves, by far the greatest amount is installed by paperhangers. The work requires a high degree of skill and unless good workmanship is practiced, the finished result will be highly unsatisfactory.

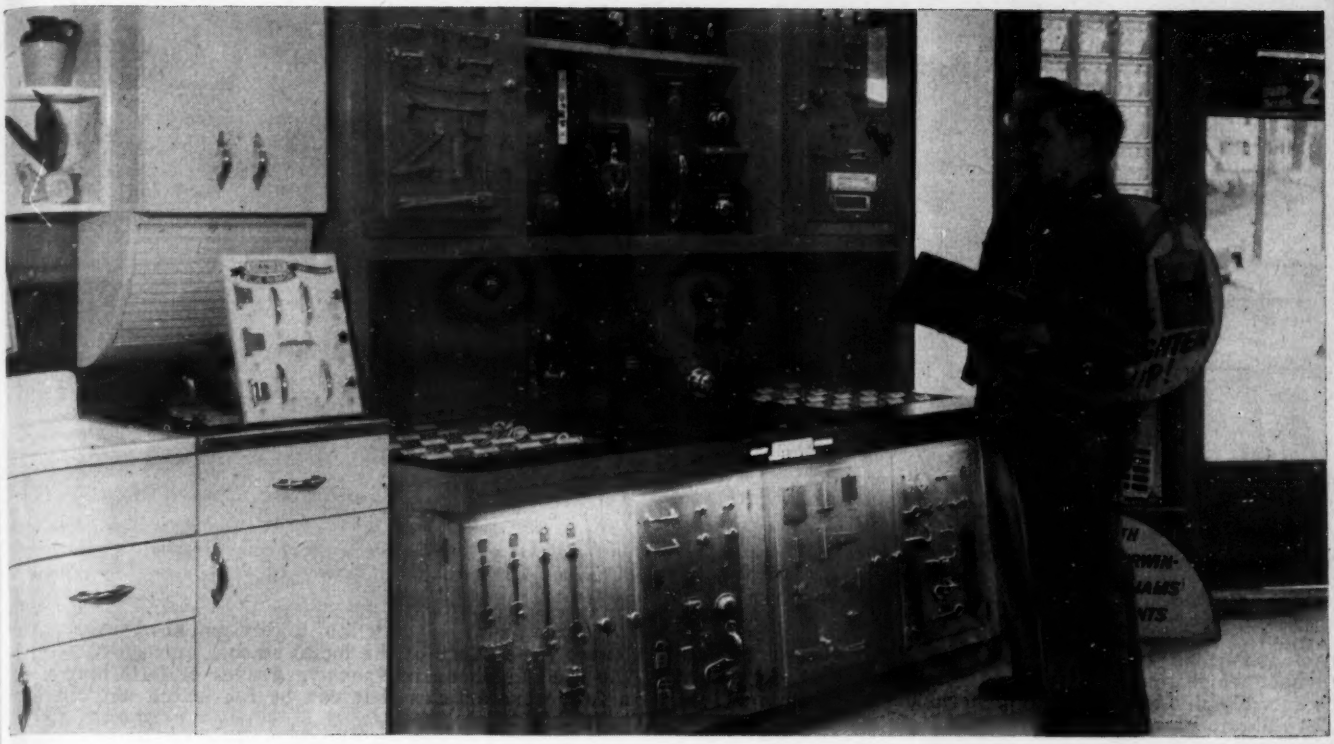
Selection of wallpaper is always done by the woman of the home, and even when the decoration work is contracted through a professional interior decorator or a decorating contractor, the woman of the home makes the actual selection of patterns and colors.

These facts present a rather complicated merchandising picture to the building products dealer who contemplates entering the field. On the surface it appears to be intricate, and a service that requires considerable attention and promotion for the volume of business it might return.

But judging from the amazingly high percentage of dealers who have added such service in the past ten years, it must afford a satisfactory return for the effort involved. One favorable aspect of the situation is that wallpaper is a high profit item. The unit sales are frequently of substantial dollar volume, and the line is readily incorporated into the paint department as an overall home decorating department.

Manufacturers of wallpaper produce elaborate sample books of their products. They also have developed sales-tested methods of displaying full strips of each pattern from a roll so the prospective customer can get an even better idea of how the particular paper will appear when installed in a room.

To display and demonstrate wallpaper properly, considerable space is required. The area itself must be attractive not only to favorably impress the feminine customer but to display the merchandise to maximum advantage. Careful attention must be paid to lighting so the true color of the papers will be recognized. This prevents disappointment and disatisfaction of a customer who finds the applied paper is a different shade than she thought she selected.



Section 6 Hardware and Related Items

THE BROAD FIELD covering items that fall under the general classification of hardware is so varied as to application that it is difficult to segregate them into one section for purpose of discussion. Some are explained more in detail in other sections of this book. (Refer to Section 3, Metal Products; and Section 7, Power and Hand Tools.)

TYPES OF METALS

Today there is no one best material for hardware. For some uses, the material must be resistant to wear; for others, resistant to corrosion, etc. Many hardware parts require great impact strength, others require great tensile strength. In many instances, volume or cost determines the kind of metal.

A few years ago, all good hardware was cast. That is not true today. Now, the form best suited to the particular part is used, and many fine locks are made of pressure formed metals.

The manufactured forms of metal are wrought, forged, drawn, and extruded. Wrought metal is produced by passing ingots of metal between rolls until it is the desired thickness. Forging is the art of shaping metals in the solid state by blows or pressure. Drawn metal is produced from rolled or extruded stock by pulling it through dies to form rods, tubes, or wire. Extrusion is the process of forcing metal in the plastic state through a hardened steel die of the desired cross-section, much as tooth paste is squeezed from a tube. These metals are in general harder and stronger than the cast forms.

Hardware metals are classified as ferrous and non-ferrous. Ferrous metals are alloys of iron, steel, cast iron, and malleable cast iron. The non-ferrous metals include copper and its alloys, such as brass, bronze, and nickelene; aluminum, tin, zinc, and alloys produced by combining these metals.

Aluminum: Aluminum is the lightest of the metals used in hardware manufacture. It is white in color with a bluish cast. It is soft, ductile and easy to machine, but the best cast forms do not wear well in bearings, or have sufficient strength for lock bolts.

A new alloy of wrought aluminum makes excellent keys. Many millions have already been supplied with builders' locks.

Polished surfaces of aluminum tend to oxidize slightly, spoiling the lustre of the finish, and the metal has some tendency to discolor. This can be prevented by a surface treatment known by the trade name of Alumilite, which has brought this metal into somewhat wider use in decorative builders' hardware.

Brass: Is an alloy of copper and zinc. The alloy used in builders' hardware—65% copper and 35% zinc—is yellow in color.

Brass is resistant to corrosion, takes a beautiful finish and makes an excellent base for plated finishes. The natural finishes can be preserved by a colorless lacquer, or maintained by occasional polishing. If allowed to age naturally, a fine patina forms that is much prized by decorators.

Bronze: Is an alloy of copper and tin. The alloy in builders' hardware, 90% copper and 10% tin, is reddish in color.

Bronze is also resistant to corrosion, finishes beautifully, and makes a splendid base for plated finishes. If allowed to age naturally it darkens into a rich statuary bronze.

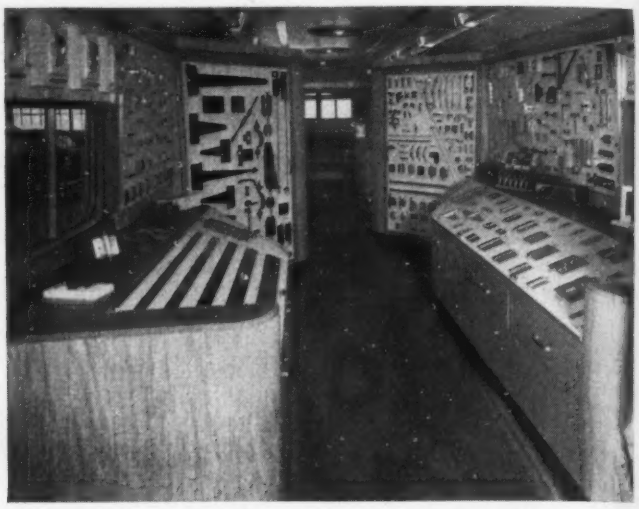
Chromium: Is a hard, silvery white metal with a bluish tinge. Its principal use in hardware manufacture is as a decorative electroplating over nickel plate on brass or bronze. Chromium is very resistant to corrosion but dissolves in hydrochloric and sulphuric acids. Being somewhat harder than case hardened steel, it is also highly resistant to wear.

Iron: Is the most useful as well as the most abundant of metals. It is silvery white in color and very tenacious, malleable, and ductile. It is never used in a pure state, but is alloyed with other metals and metal-like substances to form irons and steels of widely variant properties.

Gray cast iron is not malleable. It is easy to machine and can be given any desired form in casting. Being hard it wears well; its graphitic content giving it some self-lubricating properties and good rust resistance.

Malleable cast iron is made from white cast iron by an annealing process called malleabitizing. This metal is capable of considerable distortion and soft enough to be readily machineable.

THE HARDWARE department above includes not only major items of builders hardware, but many small consumer items as well. Arranged in a section of the store, and using both wall cabinets and island displays, the department is an efficient segment of the business.



THE USE OF display panels for the exhibit of builders hardware is the most popular method of product exhibit with dealers. When mounted on cabinet door panels, the fixture also may be used for storage of inventory.

Steel is an alloy of iron and carbon refined from pig iron and scrap steel in a Bessemer Converter or other furnace which removes most of the impurities. Steel may be roughly divided into four general classifications: (1) The mild and medium carbon steels from which hardware, forgings, springs, etc., are made; (2) The harder, high carbon steels used for dies, high grade tools, etc.; (3) The alloy steels to which some other metal gives definite properties and the name; and (4) High speed steels.

Nickel: Is a silvery white metal with a yellowish cast. It does not corrode but its surface oxidizes in time, forming a white film which spoils the lustre of its finish. Its chief use in hardware is in the production of nickelene, and as an electroplated finish for chromium plate.

Nickelene: Is an alloy of copper, zinc, and nickel. The nickel content may vary from 10 to 20% depending on the properties desired.

Nickelene is white in color with a yellowish cast. It is strong, tough, and very resistant to corrosion. The only effect that severe exposure has on good quality nickelene is to slightly strengthen the yellowish cast in the metal.

Zinc: Is a bluish white metal. On exposure to air, zinc becomes coated with a film of carbonate and is then very resistant to corrosion. It is used in great quantities in the production of brass and bronze, in die-castings, and as a coating to protect iron and steel from corrosion.

METAL FINISHES

The natural finishes of metals are created by mechanical operations which bring out the inherent beauty of the metal. This class of finish is obviously limited to the non-ferrous metals because iron and steel in a natural finish would rust.

Polished Finishes: The finest of the bright natural finishes is produced by two highly skilled operations—polishing and buffing. The polishing cuts away rough surfaces and leaves a perfectly smooth face. The buffing consists of holding the article against a succession of cloth wheels on which buffing compound is smeared. This operation brings up a high gloss finish.

Burnished Finishes: Certain small brass and bronze parts can be given a smooth surface and high lustre by a new and patented burnishing process. The parts are first rolled in steel barrels with sand and water until all surfaces are smooth. They then are rolled in wood lined barrels in abrasives which are milder in each consecutive barrel. These barrels also contain bits of leather and other materials to cushion the parts. Finally, the parts are brought to a high lustre on hand operated machines. The entire cycle requires from 50 to 60 hours.

Tumbled Finishes: Another inexpensive burnishing operation is used for small cast iron parts. They are tumbled in steel barrels in sand and water, then in steel burnishing balls or shapes. The polishing is accomplished by the peening action caused by the constant rolling of smooth steel burnishing shapes against the cast parts.

Polished Finishes: The final cold rolling operation on wrought metal is done on highly polished rolls. This leaves the surface of the metal smooth enough to serve as the final finish on inexpensive grades of butt hinges and a few other articles that can be fabricated without marring this finish.

Dull Finishes: There are two widely used methods for producing dull, scoured, satin, or wheeled finishes in natural colors. In one, the article is polished and buffed, then wet scoured with pumice. In the other method, the polished part is dry scoured with greaseless abrasive compounds on cloth wheels. Almost any degree of dullness can be obtained by either method.

Oil Rubbed Finishes: The oiled and waxed finishes given brass and bronze make them appear as they would after several weeks of natural aging. The article is first given a polished finish, after which a coat of special wax or oil is applied to the surface.

Bower Barff: This is a black, rust resisting finish on iron and steel obtained by converting the surface of the metal into a hard, non-porous oxide. This is done by heating the article to about 1,700 degrees F. in special furnaces, and then introducing live steam and producer gas. This process seals the pores of the metal and alters the texture of its surface so that it is practically impervious to moisture.

Parkerizing: This is a patented rustproofing process for the treatment of iron and steel. By means of hot chemical solutions, the surface of the metal is converted into a complex insoluble phosphate of grayish black color.

Oxidized Finishes: These finishes are produced by dipping copper or copper alloys into chemical solutions designed to produce the desired color. By varying the chemicals and treatment, various degrees of color can be obtained, even a two-toned effect.

Electro-Plated Finishes: This is a process by which one metal is deposited onto the surface of another by means of a direct electrical current.

Most electroplated coatings are very thin, being measured in ten-thousandths of an inch. In the case of chromium, 2/1,000 of an inch is a normal deposit.

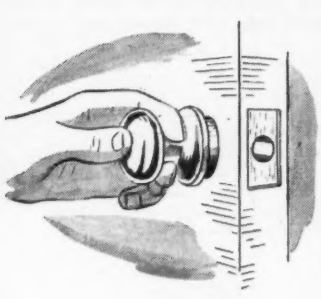
Paint, Lacquer, and Enamel: As the wearing qualities of paints and similar coatings are inferior to natural metallic finishes, the chief use of paint products on hardware is to protect iron and steel parts from corrosion. To be effective, paints must be impervious to water and oxygen, if not, corrosion may form under the paint. It must also have high adhesive qualities in order not to flake and peel in service.

Lacquer is a nitro-cellulose product to which certain gums and solvents have been added. When applied to finished articles by dipping or spraying, the solvents evaporate and leave the surface covered with a protective coating. Recently developed synthetic lacquers have proved very satisfactory, and in the future they will probably be more widely used.

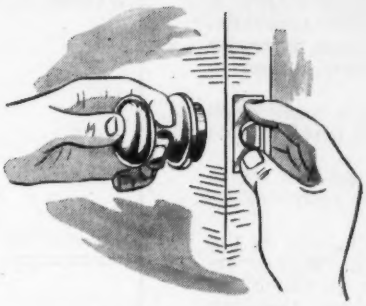
Lacquers are sometimes dyed with transparent organic dyes and then sprayed over finishes to give color effects.

one of the many extra-benefit features built into NATIONAL LOCKset

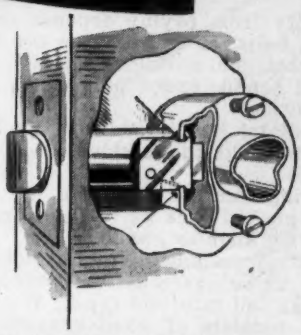
Patent Applied



1 Push in Lock Assembly



2 Push in Latch Assembly



3 Instantly Engage by firm "Tongue-In-Groove" Contact

"Slot-Engage" Installation . . . a Profitable Time Saver

Among the extraordinary engineering features of popular, new NATIONAL LOCKset is the firm yet instant slot-engagement of latch body to lock body during installation on the door. • This one step alone saves valuable minutes, which become valuable hours, when projected against almost any job. • Here is just one of many solid reasons why NATIONAL LOCKset is the best unit for you to buy, sell, specify and use. Write us for illustrated lockset catalog. It is reproduced in color and gives complete details.

America's Outstanding Lockset Values . . .
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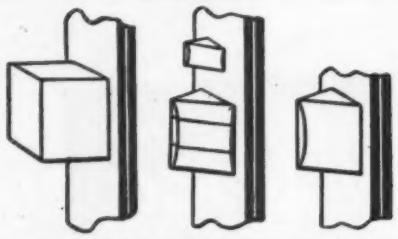
LOCKS



(Left to right) Deadbolt, deadlatch and springlatch.

Security from prying depends on the size and type of the lock bolts, of which there are three types: deadbolts, deadlatches, and springlatches. A deadbolt is a manually operated square ended bolt which is positively locked in both positions.

A deadlatch has, in addition to a latchbolt, a small latch which deadlocks the latchbolt so it cannot be pried by end pressure.

A springlatch has a beveled, spring-actuated bolt which may be pushed back by the end pressure, or retracted by means of a knob or handle.

Security from picking and skeleton keys depends on the obstacle to be overcome to operate the bolt. Key operated locks fall into two types; Warded type, in which the obstacle consists of fixed constructions within the lock which interfere with the movement of the key, unless the key has grooves or notches coinciding with the wards; and the Tumbler type, in which the obstacles consist of one or more movable tumblers which are moved into a certain position by the proper key.

Security from duplicate keys is obtained by using a lock which has a great number of different key changes. Locks have as few as four changes, while others have an almost unlimited number of key changes.

The most difficult to pick, impossible to open with skeleten keys, and with practically unlimited key changes are pin tumbler locks, the most secure of all key-operated locks.

Types of Locks and Keys: The five types of locking construction used most are: (1) Warded, (2) Disc-tumbler, (3) Bit-key, (4) Lever-tumbler, and (5) Pin-tumbler.

Warded Locks: Warded locks are the cheapest type. Their construction is such that cuts in the proper key will clear wards in the lock, thus actuating the bolt. This simple mechanism provides little protection. Generally made with only six key changes, every sixth lock has the same key no matter how many are in use.

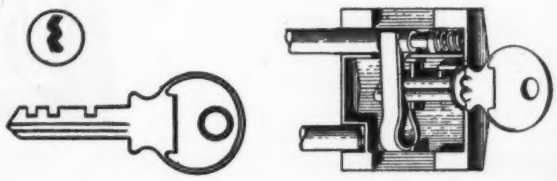
Disc-tumbler Locks: Disc-tumbler locks are widely used in the automotive industry. This has brought them into general use because of their similarity in appearance to pin-tumbler cylinders and keys. The mechanism is composed of a series of plates and tumblers which extend from a plug into a shell, thus preventing the plug from rotating.

Bit-key Locks: The bit key lock is operated by a key which has a solid cylindrical shank and a stem with a wing bit. The key lifts one or more lever-tumblers and aligns their gate so that a post on the deadbolt can pass through them. This type affords security ranging from poor to excellent, the degree depending on the kind and number of tumblers used. Bit-key locks are used for inside locks of houses.

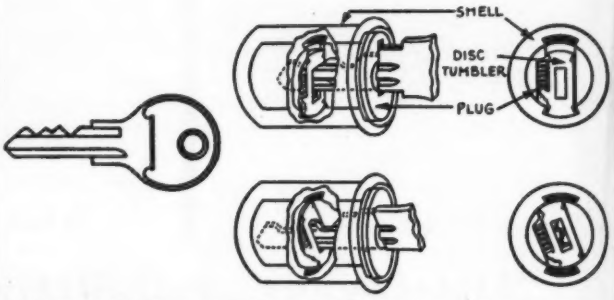
Secure-lever Locks: This type of lock has a flat key with bits or cuts along one side. This key lifts the tumblers and aligns their gate so that a post on the bolt can pass through the gate. This type also provides security from poor to excellent, depending on the mechanism; and it is used extensively for cabinet locks.

Pin-tumbler Locks: These are the most secure of all locks operated by keys. This type is composed of a series of pin tumblers in pin chambers which extend from the plug into the shell, preventing the plug from rotating. The key lifts these pins to a point where the joint between the pin and its driver corresponds exactly with the joint between the plug and the cylinder, thus freeing the plug to rotate within the cylinder. This type lends itself to more key changes and greater master-keying possibilities than any other type. They should be used where the utmost protection is desired.

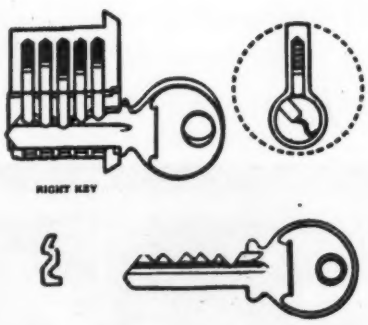
THE 5 MAJOR TYPES OF LOCKS



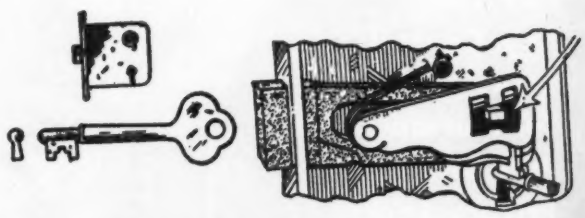
***WARDED LOCK**—works on principle of set wards in mechanism that coincide only with correct key.*



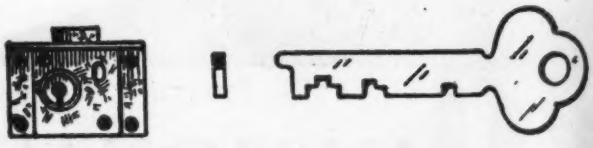
***DISC-TUMBLER LOCK**—consists of plates and tumblers in a plug and cylinder. Correct key aligns plates and permits plug to turn.*



***PIN-TUMBLER LOCK**—similar to disc, except alignment of pins is necessary instead of plates. This type permits an almost unlimited combination of keying.*



***BIT KEY LOCK**—A cylindrical key with a wing bit lifts one or more lever tumblers to actuate this lock.*



***SECURE-LEVER LOCK**—Has a flat key that ups tumblers and lines up their gates to actuate bolt.*

FIVE
WAYS
to GREATER
PROFITS
Profits come from all directions when you feature the complete line of Stanley quality hardware: Steel and Brass Hardware for general use, Solid Brass and gleaming Chrome Matching Cabinet Hardware, Residential Sliding Door Hardware, "Floating"* Garage Door Hardware and Black Ornamental Hardware. Stanley quality satisfies customers . . . and pays you big profits. Stock and sell hardware by Stanley, the "buy-word" in hardware sales. The Stanley Works, New Britain, Connecticut.
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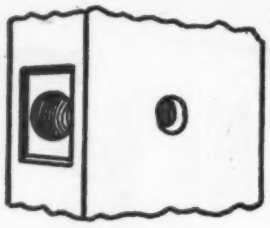
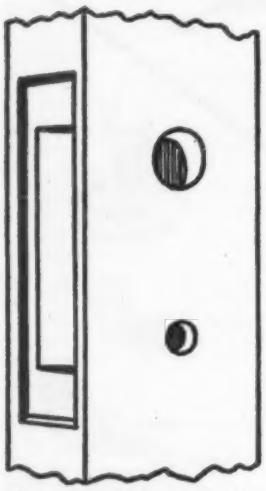
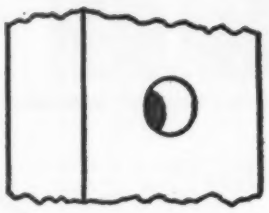
HOW VARIOUS LOCKS ARE INSTALLED IN DOORS



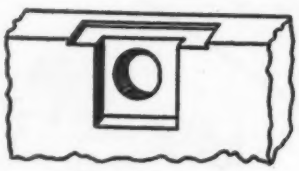
Bore-in type



Conventional Mortise Lock



Rim Lock



Half-Mortise Lock

KEYING

A series of locks may be arranged as to their keys, in any of three different ways: (1) All different, each key opening only one lock, (2) Master-keyer, with all locks different, but with a master key which operates all the locks, and (3) All alike, any key opening all of the locks.

Under plan 1, the wards or tumblers in each lock are made so that they can be operated by only one key. Locks carried in stock are usually made in this way.

Under plan 2, the construction is such that each lock can be operated by two different keys: One, the "Change key" and the other the "master key." Master key locks must be made to order. Plan 3, the wards or tumblers are identical in every lock so that a single key will operate them all.

INSTALLATION

Locks may be classified by method of installation as (1) Mortise Locks, (2) Bore-in Locks, (3) Rim Locks, and (4) Half Mortise Locks. Generally, the first should be chosen for security, the second for ease of installation. Copies of colonial box (rim) locks are sometimes used for appearance, but night latches are the only rim locks widely used on full size doors. Most drawers and cabinet doors are thin. For this reason most cabinet locks are made for half mortise installation.

BUTT HINGES

The leaves of mortise butt hinges are swaged; i.e.; slightly offset at the barrel, which permits them to come closer together. Strap and tee hinges, and butt hinges for surface application are not swaged.

Two dimensions are needed to describe mortise butt hinges; the first is the length of the joint (not including the tips), the second, the width when open. Thus a 5 x 4 butt hinge is 5 inches high and 4 inches wide when open. Only one dimension (the height) is given for half-surface, full surface, and half mortise hinges.

Many types of butt hinges are available with either plain or ball bearings. Ball bearing hinges should be used on doors used frequently and those having closers.

The size of hinge required for a given door depends on the thickness and weight of the door, and the throw necessary to clear any projecting casings.

When it is necessary for the door to clear projecting trim or chair rail, the minimum size of hinge may be determined by adding the thickness of the trim to twice the thickness of the door and (because the hinge leaf is not mortised entirely through the thickness of the door) deduct one-half inch.

Mortise Butt Hinge: One leaf is mortised into the jamb, the other into the edge of the door. This is the most popular type because it is neater in appearance and costs less than other types.

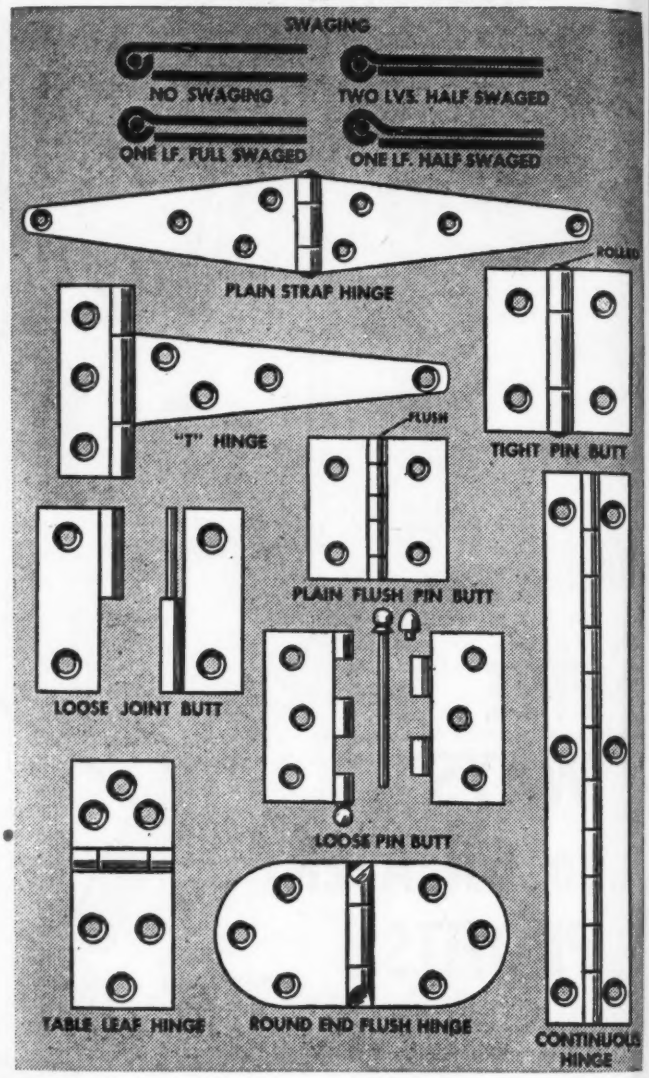
Half-Surface Hinge: The jamb leaf is mortised into the jamb, the door leaf is attached to the face of the door stile.

The chief use of this stile is for kalamein doors in hollow metal frames. It is also sometimes used with wood doors in wood frames to avoid mortising the door leaf.

Full Surface Hinge: The jamb leaf is attached to the face of the jamb; the door leaf to the face of the door stile. These hinges are made in two types; one is for kalamein doors in channel or angle iron frames; the other for tubular steel doors in channel or angle iron frames.

Half Mortise Hinge: The jamb leaf is attached to the face of the jamb; the door leaf is mortised into the edge of the door. This type is used for wood or hollow metal doors in channel or angle iron frame.

Common Types of Hinges



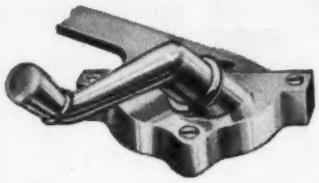
DOOR CLOSERS

Just as doors are intended to provide comfort, security, privacy, etc.; the door closer was developed to assist in fulfilling the same "wants" by eliminating the necessity for remembering, by closing safely, quickly, and quietly, and by latching securely; in other words to control doors so that they function automatically.

Practically all doors need closers, and anyone buying a door or hardware for a door is a prospective customer for this very closely related item.

There is a wide selection of closers on the market. Most are the pneumatic, liquid, or spring type, and they are supplied in a number of sizes; so a suitable closer can be selected for any type of door and for any type of operation.

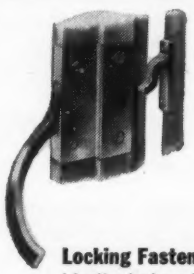
A recent liquid type has been introduced that is completely reversible; can be installed easily and quickly on either a right or a left hand door.



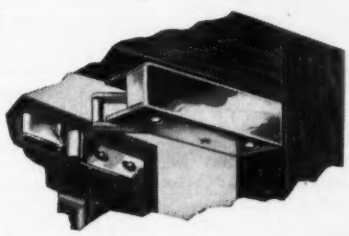
Operator 4703W, for heavy wood casements, embodies highest quality metals and workmanship. Its internal gearing was originated by, and is an exclusive feature of, The Getty Company. It operates through screens and on casements using butt or extension hinges—as do all Getty operators.

Operator 4715 is an inexpensive angle-drive operator for residential wood casements. It is precision-built, handsome of line, and lubricated for a lifetime of tough duty—as are all Getty operators.

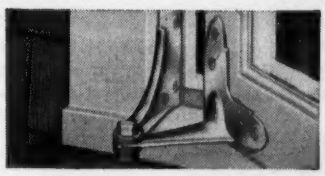
Heavy duty reversible operator 4700 embodies the horizontal worm-and-gear principle. This low-priced, sturdy operator is interchangeable for left or right hand wood casements. It is easily installed —as are all Getty operators.



Locking Fastener 4608W is ideally designed for screened wood casements. It locks and unlocks the window without disturbing the screen. Its graceful handle has minimum projection, assuring adequate clearance for Venetian blinds. It's one of a family of high-quality fasteners.

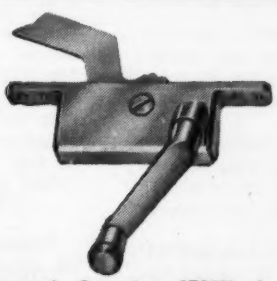


Automatic Closer 4649 pulls top of out-swinging wood sash snugly against the frame. It helps prevent warping, assures all-around tight contact. Easily installed—4 screws; no mortising required.



Extension Hinge 2529 provides a 4" sash clearance for maximum ventilation and permits cleaning of the outside casement from inside the room. Firm corner support of sash is assured by flange-type leaf of cold-rolled steel, cadmium plated.

Operator 4703AF is exactly like 4703W but drilled to accommodate metal casements. Its internal gear construction is designed for heavy-duty service on residential and commercial casements.



Replacement Operator 4706H, for metal casements, is the only replacement operator adaptable to nearly all metal casements. The specially drilled holes of this operator permit perfect installation on most metal frames, regardless of the type of operator being replaced.

Locking Handle 4634½S is made for metal casements. Its protective action and ample leverage —characteristic of all Getty fasteners—assure perfect snugness and protection against the elements. It's one of more than 50 different metal casement fasteners produced by Getty.

Write for our illustrated folder A.

Getty Operators are found on more casement windows than all other operators combined.

H. S. GETTY & Co., Inc.

3348 NORTH 10th STREET
PHILADELPHIA 40, PA.

Canadian Representative:
A. N. Ormsby Co., 23 Scott St., Toronto

SCREEN MESH is a good hardware item for the retail lumber dealer. In addition to the volume sold to contractors for new construction, there is a perennial replacement market with home owners.

MODERN DESIGN of cabinet hardware make it a definite part of room decoration. This opens great potential with home owners whenever they undertake a redecoration project in their home.

GARAGE DOOR HARDWARE

Garage doors are supplied in four main types; (1) Hinged doors, (2) Folding-sliding doors, (3) Swing-up doors, and (4) Roll-up doors. Each type has a suitable type of hardware, most of which is supplied by the door manufacturer to insure the proper operation of his particular unit.

There is a considerable replacement market for this kind of merchandise, and it is therefore advisable for the dealer to acquaint himself with the various mechanisms that actuate and secure the various types of doors available. Manufacturers' catalogues have these items listed and described, and are an excellent reference source for this information.

For further information, see Section Garage Doors.

HARDWARE FOR CASEMENT WINDOWS

Casement windows have numerous advantages and are very popular with many designers, builders, and home owners. In addition to their picturesque qualities, no other windows provide such complete ventilation and such an unobstructed view.

For many years casement windows presented a screening problem until the advent of the direct-acting casement adjuster. This adjuster allowed the casement to be controlled through the screen, although its action was somewhat awkward.

The perfection some years ago of the angle-drive internal gear casement operator, however, has had significant influence on the popular acceptance of wood casements. This ingenious device not only enhances the appearance of the window, but is effective in use as well.

Now it is possible to have complete casement control at all times without disturbing the screen. The sash may be opened or closed, or held open at any degree with the under screen angle-drive operator.

Additional accessory hardware has also been developed such as locking fasteners attached midway up the sash, whereby the sash may be locked and unlocked without disturbing the screen. Exterior cleaning of casements has been simplified by the use of extension hinges which allow ample space between the jamb and the open casement.

To eliminate any leakage of winter winds and to make a tight contact all of the way around, the automatic top closer has been developed. This efficient appliance is easily attached at the top of the casement and pulls the sash in tightly against the frame, at the same time helping to prevent and overcome warping.

CABINET HARDWARE

In recent years there has been an increasing demand for modern cabinets, built-ins, sliding closet doors, and other home conveniences that provide maximum beauty and efficiency. To meet this demand the hardware industry has produced a wide variety of cabinet hardware; a type and style to fit every need and every taste.

A large majority of the new homes built during the past few years have had these features incorporated in them; but a recent nationwide survey clearly indicated that the majority of older homes do not have these modernizing touches.

For the building material dealer this survey should be highly significant, as it is a compelling index of a tremendous potential for additional business; a market waiting for him to demonstrate the beauty and practical utility of modern cabinets and cabinet hardware.

Women are the key to this market, and for this reason, cabinet hardware manufacturers have designed their products with maximum beauty; using various metals, designs, and even plastic inlays to fit the decorative tastes of all feminine buyers.

Much of the technical information covering these products has already been discussed in the previous section about builders' hardware: the metalcraft techniques are the same. There is also quite a similarity in the basic design of cabinet locks and hinges. However, the cabinet hardware line does not end with hinges and locks.

In addition to pulls and fasteners of various types there are such specialized items as mechanisms for sliding closet and cabinet doors, fully inset handles and catches for various types of panels, and many others.

Manufacturers of these products have developed attractive catalogues and store displays to explain and demonstrate their beauty and their function. By using them to the fullest advantage, the dealer will find a ready demand for these items, and a steady profit.

ACCESSORY HARDWARE

Under the classification of accessory hardware may be catalogued many hundreds of items, for this broad heading includes those articles that are designed for use in the home; they are functional, decorative, or used in home care and maintenance. Some building material dealers carry many of these items, others only a few. It is difficult to advise just how far a dealer should go in stocking and selling this merchandise. Much depends on local conditions. There are some, however, that stand out in importance, as they have a direct utilization with other materials the dealer handles, and it is these that will be covered in this section.

FORGED IRON HARDWARE

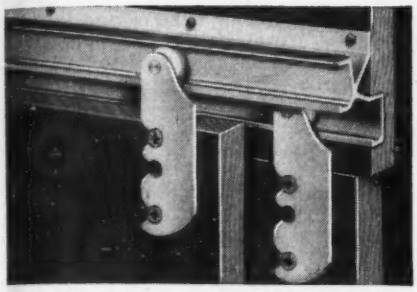
There is a great deal of history and tradition wrapped up in the art of making forged iron hardware. The products of earlier days, because of their charm and utility, are still in great demand today; not only to carry out the architectural scheme of a particular home, but for much wider usage on garden and fence gates, garage doors, etc.

Most of the designs can be classified in four main groups: (1) Arrowhead, (2) Heart, (3) Bean, and (4) Tulip. Each of the four has a wide latitude of design.

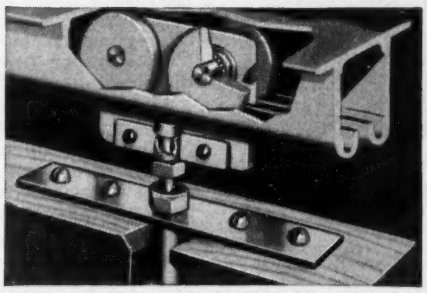
The actual mechanics of these fitments were adapted to the construction details of the particular period during

ONLY KENNATRACK HAS SLIDING DOOR HARDWARE

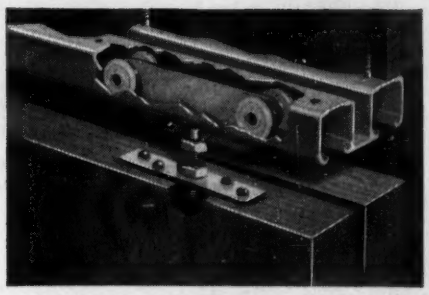
Specially Designed and Engineered for every interior application



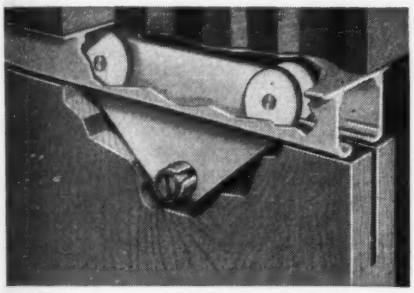
SERIES 250—For by-passing ¾" to 1⅛" doors on cabinets, wardrobes and fixtures. Hanger permits mounting doors flush with cabinet face.



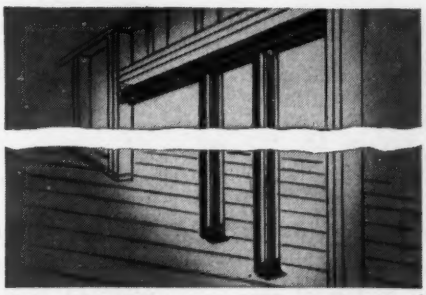
SERIES 400—For heavy closed pocket installations. This is generally considered the finest sliding door hardware obtainable. Allows vertical door adjustment. Ball bearing hangers.



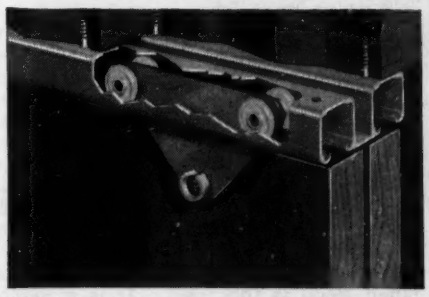
SERIES 600—A new double track designed for 1⅜" by-passing wardrobe and closet doors. Has newly designed adjustable hanger providing convenient means of aligning door to side jamb. Allows ½" vertical adjustment.



SERIES 300—Kennatrack's most popular hanger. Series 300 is for converging doors, closed and open pocket installation. Has exclusive mounting plug feature requiring minimum headroom of only one inch.



SERIES 800—*Metal* Sliding Passage Door *Frame*. Prefabricated. Complete with famous SERIES 400 heavy duty track attached to header at factory. Eliminates all warpage. Easily installed by anyone. Vertical and horizontal ADJUSTMENT features. Wood filler strips permit plaster base, trim and stops to be nailed or screwed to frame.



SERIES 650—Exclusive expansion-sleeve mounting plug feature requires minimum headroom space of only 1". Easily installed—just screw track to header! Acceptance of these features is proven by world-wide demand.

At McKenna we specialize in only *one* thing . . . sliding door hardware. As a result the KENNATRACK line is the most comprehensive and versatile line of sliding door hardware ever available. There is a KENNATRACK for every purpose. Each track is specially designed and engineered for a particular interior use. Each door slides smoothly not on two, not on four, but on EIGHT nylon wheels except on Series 250.

In addition there is a KENNATRACK Series 800 METAL PASSAGE DOOR FRAME. It comes prefabricated and complete with SERIES 400 ball bearing heavy duty track attached to header at the factory. Can be assembled on the job in about 20 minutes.

Features of the KENNATRACK line are too numerous to mention. Moreover, you get all your sliding door hardware from one source. Ask any KENNATRACK jobber about KENNATRACK'S record for fast delivery, prompt service! Specify KENNATRACK for the plus in value.

Write Department A-41 for full details.

JAY G. McKENNA, INC.

ELKHART, INDIANA

JAY G. McKENNA (Canada) Ltd., 104 Jarvis St., Toronto, Canada

SPECIALIZING EXCLUSIVELY IN THE MANUFACTURE OF SLIDING DOOR HARDWARE

SLIDING DOORS are gaining widespread popularity. Hardware for them is made for interior doors, cabinets, storage walls, etc., and is a good item for the dealer to handle.

which they were developed. Many hinges were of the pintle and strap type. Mortise applications were not too practical in earlier days, and consequently present day forged iron hardware rarely is of this type.

Latches too were of unique and ingenious design, and a wide variety has survived time to be copied authentically by present day manufacturers.

Modern production methods have made it possible to add the distinctive touch of genuine forged iron hardware about the home at a surprisingly moderate cost. All pieces necessary for the complete trim of a home are available in several authentic designs.

Forged iron will blend properly with any of the following types of architecture: Cape Cod, New England, Southern and Dutch Colonial, American Farm, English, including Tudor and Cotswald, Mediterranean, and French. It is also ideally suited for American Ranch type homes.

Any idea that forged iron is limited to naturally finished wood is incorrect. It is a matter of historical record that even in George Washington's time most forged iron hardware was applied to painted surfaces.

Manufacturers of these products, too, have developed attractive display panels, and due to the natural beauty and appeal of the products themselves, these are powerful sales getters in the dealer's store, particularly with those customers whose tastes lead them to want the distinctive and authentic in any period reproduction.

SLIDING DOOR HARDWARE

The use of sliding doors, not only for interior doors, but in cabinets, storage walls, etc., has created a market for a comparatively new type of hardware. A number of mechanisms have been introduced to permit easy sliding of the doors, under the general classification of sliding door hardware.

Most common of these is the suspension type, upon which the door is hung, and which consists of ball bearing rollers that slide in a metal channel. They are made in a range of sizes for doors from ¾" to 1¾" in thickness and up to 3' in width. Some have composition tires on the rollers for noiseless operation.

For openings wider than 3', converging units are installed. Combinations of these can be adapted for any size opening.

Application is simple, and is covered by each manufacturer for his product. The better types have adjusting screws whereby the door can be maintained in perfect working order at all times.

INSECT WIRE SCREENING

Insect wire screening—16 × 16, 18 × 14, and 18 × 18 mesh woven wire screening (carbon steel, commercial bronze, and aluminum), for protection against mosquitoes as well as flies and larger insects.

Galvanized steel wire screening—16 × 16, 18 × 14, and 18 × 18 mesh carbon steel insect wire screening for protection against mosquitoes as well as flies and larger insects. The metal used for the coating shall be zinc of at least 98 percent purity, and the thickness (by weight) of the zinc coating shall be equivalent to at least 5 percent of the weight of the bare steel wire used in weaving the screening.

Bronze screening—16×16, 18×14, and 18×18 mesh commercial bronze insect wire screening for protection against mosquitoes as well as flies and larger insects; woven from wire containing 89 to 91 percent of copper and the remainder zinc; lead or iron occurring as impurities shall not exceed 0.05 percent each.

Aluminum screening—16×16, 18×14, and 18×18 mesh aluminum insect wire screening for protection against mosquitoes as well as flies and larger insects; woven from aluminum alloy wire equal to, or demonstrably better, for the purpose, than what is known in the trade as 56S-H392 cladded aluminum alloy wire having a minimum tensile strength of 50,000 pounds per square inch.

Mesh—Mesh is the width of one opening plus the thickness of one wire; alternatively considered as being the distance from the center of one wire to the center of the next adjacent wire. The technical designation of the mesh count of insect wire screening is the number of meshes per linear inch, counted in the direction of both the warp and the filler wires. When used as a common designation of the "mesh size" of insect wire screening, the word "mesh" is generically accepted as meaning the number of open spaces per linear inch in both warp and filler directions.

All standard wire screening shall be made of high-grade material and with good workmanship. It shall be free from any defects that might affect its serviceability or appearance. Well-made splices not over 1 inch long and showing no tails are permissible at any point of any individual wire, provided, however, that the number of splices shall not exceed 30 in any stock roll nor two splices in any 1 square foot of finished screening.

Mesh and wire size—The mesh counts, sizes and kinds of wire, and types or character of finishes for standard insect wire screening shall be as shown in the following table:

Standard Insect Wire Screening

Metal	Mesh			Dia. of wire in.	Finish
Steel	16x16	18x14	18x18	0.011	*
Commercial bronze	16x16	18x14	18x18	.011	†
Aluminum	16x16	18x14	18x18	.013	‡

*Galvanized.
†Bright or antique (dark).
‡Natural or dark.

Widths—The stock widths of all types of standard insect wire screening shall be 24, 26, 28, 30, 32, 36, 42, and 48 inches.

Widths other than those listed in paragraph 5.2, when made to special order, may be labeled "standard" provided they conform with all requirements for mesh size, wire size, and kind of metal, as elsewhere set forth in this commercial standard for insect wire screening.

Roll length—All standard stock rolls of insect wire screening shall be 100 linear feet in length; shall contain not more than two pieces per roll, and no piece shall be less than 10 linear feet in length.

Mesh count—Accuracy of mesh count in the direction of the warp or filler wires shall be determined by counting the mesh openings for any interval of 1 continuous linear foot and dividing the result by 12.

Wire diameter.—Accuracy of the wire diameter of steel insect wire screening shall be determined by computing the average of the measured diameter of not less than 10 warp wires together with the same number of filler wires, taken at random from the finished screening, but with all coating or surface finish (if any) removed.

In commercial bronze and aluminum insect wire screening the same diameter of wire shall be used for both the warp and the filler, and accuracy of the wire diameter shall be determined by computing separately the average measured diameter of not less than 10 warp wires and of the same number of filler wires taken at random from the finished screening.

For standard galvanized insect wire screening a size of wire may be used for the warp that is different from the size employed for the filler. Such variations in size, however, shall not be excessive, and in all cases the average diameter of warp and filler wires for galvanized steel insect wire screening shall be 0.011 inch. For standard commercial bronze and aluminum insect wire screening, the same wire diameter shall be used for both the warp and the filler—0.011 inch for bronze and 0.013 inch for aluminum.

THERE'S A King Cotton CORD FOR EVERY BUILDING PURPOSE

THE King Cotton LINE

Chalk Line—Made from a strong fine cotton yarn but softly twisted to hold chalk.

Braided Cord — A strong cord which will not kink or unravel. Used as Mason's Line, Awning Cord, etc.

Twisted Mason's Line — Similar to Chalk Line but put up in connected hanks. Used as Chalk Line, Layout Line, etc.

Venetian Blind Cord—Made of the highest quality fine plied yarn. This is the best blind cord made. Available in a wide assortment of colors.

Sash Cord—A remarkably strong, long lasting cord. A tough cord for tough jobs.

Cable Cord. An excellent grade of medium laid 8's yarn seine twine. Packaged in a transparent Snap-Sack* which displays, protects and makes each ball immediately available. Wrapping twine in cones and balls also available in Snap-Sacks.

*T. M. Shellmar Products Corp.

Who are your customers?

- **Contractors, Carpenters, Plumbers, Electricians?**
- **Masons, Roofers, Tile-setters, Paper-hangers?**
- **Home Mechanics, Farmers, Home Owners?**
- **Landscapers, Gardeners, Planters?**

These customers of yours use cord constantly in their daily work. You should carry the King Cotton Line because — it's a ***High Quality*** Line — it's a ***Complete*** Line. Each of your customers can find in the King Cotton Line cords that exactly fit his requirements.

For faster, easier sales, Carry the ***Complete*** King Cotton Line.

Remember — **90% of your customers use cord in their daily work. Carry the Complete King Cotton Line.**

Catalog available upon request.

King Cotton CORDAGE

JOHN H. GRAHAM & CO., INC.

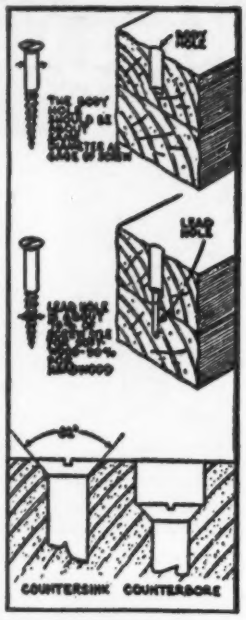
105 DUANE STREET • NEW YORK 8, N. Y.

Types of Wood Screws

DRILLS FOR WOOD SCREWS

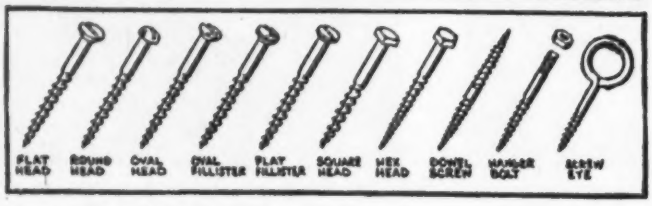
Gage of Screw	Dia. in Decimals	Body Hole Drill	Lead Hole Drill	C'Bore Drill
0	.058	53	68	32
1	.071	49	57	20
2	.084	44	56	16
3	.097	40	52	4
4	.111	33	52	B
5	.124	1/8	52	F
6	.137	28	47	L
7	.150	24	47	O
8	.163	19	42	S
9	.177	15	42	T
10	.190	10	38	X
11	.202	5	38	7/16
12	.215	1/4	38	29/64
14	.242	D	31	15/32
16	.269	I	28	17/32
18	.294	19/64	23	41/64

Lead holes are seldom used for Nos. 0 and 1 gage screws. In soft wood, lead holes are unnecessary for gages less than No. 6.

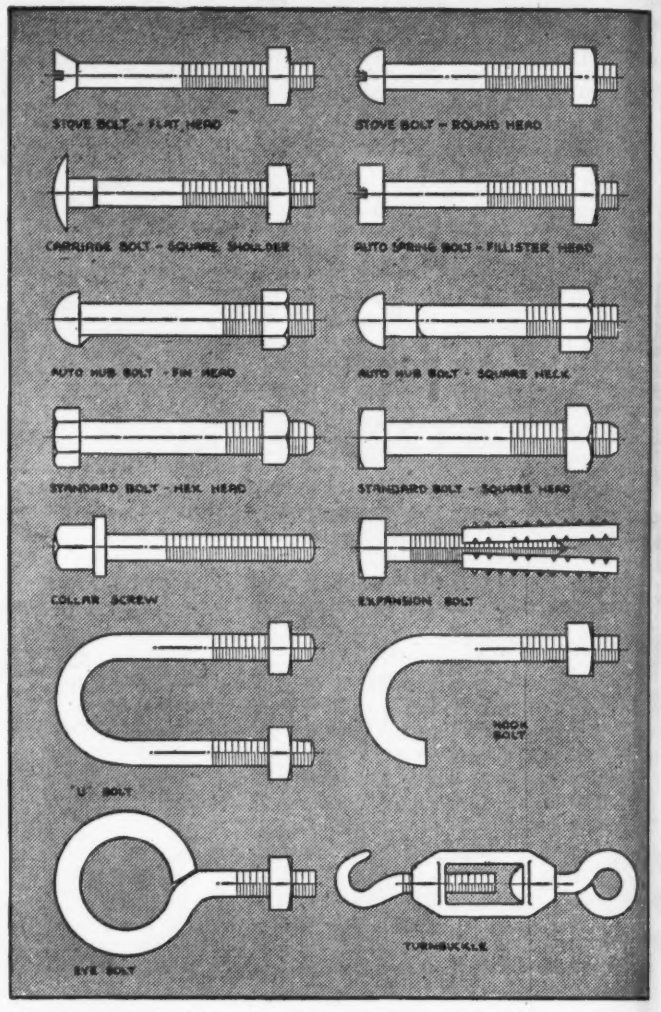


LENGTHS MADE IN EACH GAGE

Length	Gages	Length	Gages	Length	Gages	Length	Gages	Length	Gages
1/4	0-4	3/4	2-16	1 1/2	3-24	2 1/2	5-24	4	8-30
3/8	0-9	7/8	2-16	1 3/4	5-24	2 3/4	6-24	4 1/2	12-30
1/2	1-12	1	3-20	2	5-24	3	6-26	5	12-30
5/8	1-14	1 1/4	3-24	2 1/4	5-24	3 1/2	8-26	6	12-30



Types of Bolts



Plastic Screening

Plastic screening is woven from a monofilament which is extruded from saran powder, cooled, stretched, inspected, spooled, and woven into screen cloth.

Woven of a filament having a diameter of 0.015", the screening is produced in the commercial standard mesh, 18 x 14.

This mesh is available in all standard widths, 24", 26", 28", 30", 32", 34", 36", 42", 48", and 60". The standard colors are Chicopee gray, an aluminum shade, and a dark Chicopee green.

A fine mesh screen, 20 x 20 mesh with 0.012" filament is available in gray only, in 26", 28", 30" and 36" widths.

Plastic screening is used for windows and doors of residential, agricultural and industrial buildings. Special uses have varied from protective covering on greenhouses over plants to placing over children's play pens.

It is highly resistant to damage and abuse. It has high resiliency, and can withstand high impact shock. Rustproof, stainproof qualities make it possible for screening to be left on windows, doors and porches all year around. It needs no protective painting.

Plastic screen cloth is very easy to handle. It can be splined into metal frames and tacked, stapled or splined into wood frames.

For home installation, cut with ordinary scissors. Fold cut edges under ½". Tack or staple the screening smoothly and evenly every 1½". Because of inherent characteristics, plastic screening will gradually draw itself into a snug, firm fit.

TOOLS

Power and hand tools are usually considered as a part of the general group of hardware materials. The development of these items in importance to the building material dealer, and the specific problem of sale, inventory, and display that are characteristic to them, made it advisable to include a separate Tool section in this book. For complete data on power and hand tools, see section 7.

LADDERS

Selection of the right ladder for the job is of great importance to the ultimate user of the ladder, as well as to the dealer or jobber whose desire it is to furnish a ladder to the satisfaction of the customer. Specifications are important, and should conform to the standards of the American Ladder institute and the various state codes, as well as the Federal code. Beyond the specifications, the extremely vital factor of material used is of tremendous importance.

For industrial, mill supply, painters, mechanics, electricians, window cleaners, etc., manufacturers offer equipment designed for their use, built to stand up under the stress and strain of daily work.

NAILS, SCREWS, BOLTS

Most dealers have long carried a service line of nails, screws, stove and carriage bolts, etc., for the convenience of their customers. Few items of merchandise that the dealer carries are of as great importance to construction and maintenance as these; yet they are not items that adapt themselves to merchandising methods as do most of the materials handled.

Special Fasteners—Typical of a group of specially designed fastening devices is a lock nail for ½" or 25/32" non wood sheathing that eliminates furring.

This nail is made of stainless steel which contains 18% chromium and 8% nickel for rust proofing and durability. It has a fine point and shank for easy penetration and operates when it strikes a stud back of sheathing. Radial clamping, occurring at the back while the nail is driven, affords sufficient tolerance.

The head and long shank are not integral; they adjust themselves irrespective of what angle is driven. A diagram of the operation of this nail is shown above.

Due to the importance of nails to the building material dealer, and the most unlimited use to which they are put, the succeeding pages include some much used formula to help in recommending the proper type and size for most of the common applications.

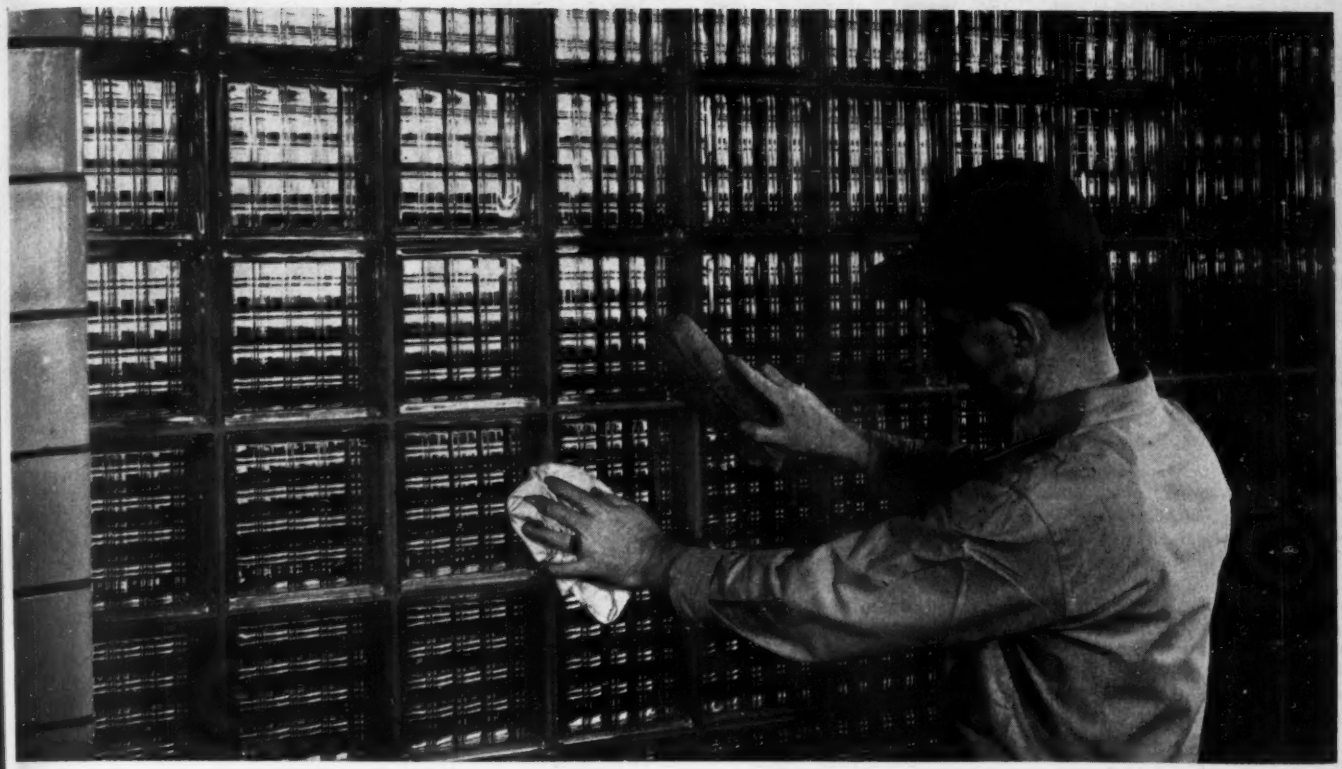
Nail Quantity Table With Nailing Instructions

Size of Nails	Nails each Bearing	Length of Nail	Gauge	Nails per Lb.	Lbs. Required 1000 Bd. Ft. 24"c.	16"c.	12"c.	Lb.	Nailing Instructions
1x 4 Boards and Shiplap....8d Common	2	2½	10¼	106	30	48	60		
1x 6 Boards and Shiplap....8d Common	2	2½	10¼	106	20	32	40		
1x 8 Boards and Shiplap....8d Common	2	2½	10¼	106	16	26	31		
1x10 Boards and Shiplap....8d Common	2	2½	10¼	106	13	20	25		
1x12 Boards and Shiplap....8d Common	3	2½	10¼	106	16	24	31		
2x 4 Boards and Shiplap....20d Common	2	4	6	31	..	82	..		
2x 6 Boards and Shiplap....20d Common	2	4	6	31	..	55	..		
2x 8 Boards and Shiplap....20d Common	2	4	6	31	..	41	..		
2x10 Boards and Shiplap....20d Common	3	4	6	31	..	50	..		
2x12 Boards and Shiplap....20d Common	3	4	6	31	..	41	..		
Base .....8d Finish	2	2½	12½	189	..	..	..	1	Per 100 Lin. Ft.
Base Shoe									
Battens .....4d Finish	..	1½	15	584	..	..	..	½	Per 100 Lin. Ft.
Bridging .....8d Common	..	2½	10¼	106	.9	1.2	1.5	4	Nails each piece
Ceiling ½ or ⅝x4.....6d Finish	1	2	13	309	6	8	11		
Ceiling ¾x4 .....8d Finish	1	2½	12½	189	9	14	18		
Corner Boards—Cornice									
Fascia 1x4 ....8d Box	..	..	.	..	..	..	..	1.5	Per 100 Lin. Ft.
Frieze 1x8 ..... 8d Box	..	..	..	..	..	..	..	2.2	Per 100 Lin. Ft.
Plancher 1x10 and 1x12....8d Box	..	..	..	..	..	..	..	2.5	Per 100 Lin. Ft.
Verge Board 1x6.....8d Box	..	..	..	..	..	..	..	2.0	Per 100 Lin. Ft.
Bed Moulding .....6d Casing	..	.	..	..	..	..	..	.5	Per 100 Lin. Ft.
Crown Moulding .....6d Casing	..	..	..	..	..	..	..	.8	Per 100 Lin. Ft.
Finish ⅞ Inch .....8d Finish	2	2½	12½	189	13	12	25		
Finish 1¼ Inch.....10d Finish	2	3	11½	121	6	10	12		
Flooring 1x3 Soft Wood.....8d Casing	1	2½	11½	145	21	32	42		
1x4 Soft Wood .....8d Casing	1	2½	11½	145	16	24	30		
1x6 Soft Wood .....8d Common	1	2½	10¼	106	11	16	22		
⅝x1½ Hard Wood.....4d Casing	1	1½	14	473	..	10	13		Nail every 10 to 12"
⅝x2 Hard Wood.....4d Casing	1	1½	14	471	..	8	11		Nail every 10 to 12"
⅞x2¼ Hard Wood.....8d Casing	1	2½	11½	145	..	14	20		Nail every 14 to 16"
1x4 Refinished .....8d Casing	1	2½	11½	145	18	..	..		Nail every 14 to 16"
2x6 D & M.....	1	4	6	31	..	20	35		
⅞x1½ Hard Wood.....8d Casing	1	2½	11½	145	..	20	27		
Furring—									
1x2 on Brick Walls.....20d Common Cut Nails	..	..	..	..	..	..	..	5¼	Per 100 Lin. Ft.
Grounds									
Gypsum Products									
Gypsum Board ¼ Inch....4d Common	..	1⅜	14	488	..	..	..	4½	Nail 5 to 7" apart on ceiling
Gypsum Board ⅜ Inch....4d Common	..	1⅜	14	488	..	..	..	4½	Nail 6 to 8" apart on walls
Gypsum Board ½ Inch....6d Common	..	1⅝	13½	364	..	..	..	6	
Gypsum Board Wood Grain4d Common	..	1⅜	15	488	..	..	..	3	Use flathead nail under trim
Gypsum Board Wood Grain4d Common	..	1½	14	534	..	..	..	1½	Use finish nail in fielddrive at 45 degree angle
Tile Board .....4d Common	..	1⅜	14	488	..	..	..	4½	Nail same as sheet rock but nail in field not in groove
Framing 2x4 to 2x12.....20d Common	..	4	6	31	10	15	20		
16d Common	..	3½	8	49	6	8	10		
10d Common	..	3	9	69	4	6	8		
Girders—Built Up									
2x 6 .....16d Common	..	3½	8	49	..	..	..	2.0	Per 100 Lin. Ft. 30 pounds
2x 8 .....16d Common	..	3½	8	49	..	..	..	2.8	Per 100 Lin. Ft. Mixed 16d
2x10 .....16d Common	..	3½	8	49	..	..	..	3.5	Per 100 Lin. Ft. or/and 20d Com.
2x12 .....16d Common	..	3½	8	49	..	..	..	4.2	Per 100 Lin. Ft. Per M

Size of Nails	Nails each Bearing	Length of Nail	Gauge	Nails per Lb.	24"c. Lbs. Required 1000 Bd. Ft.	16"c. Lbs. Required 1000 Bd. Ft.	12"c. Lbs. Required 1000 Bd. Ft.	Lb.	Nailing Instructions
Insulating Board									
½ Inch Building Board....4d Common		1½	12½	316	..	..	..		Exposed nailing No 17 1¼ wire nail Concealed nailing 4d Com. or Box
1 Inch Building Board.....8d Common		2½	10¼	106	..	..	..		Exposed nailing No 17 2" Concealed nailing 8d Com. Nail above edges 8" oc—⅜" from edge or edge Intermediate 6" apart
Bevel Plank .....4d Box		1¼	..	..	..	..	..		12" oc.
Joist Flooring and Ceiling									
2x 6 and 2x 8.....16d Common		3½	8	49	13	18	22		
2x10 and 2x12.....16d Common		3½	8	49	14	15	16		
Lath									
½ Inch Insulating Board Plaster Board	..	1⅛	13	448	..	..	..	10	4d Box or 6d box may be used. Nail ⅜" from edge 4" oc 20 nails per lath ½" from shiplapped edges
1 Inch Insulating Board Plaster Board	..	1¾	13	291	..	..	..		6" apart on all supports
Metal Lath .....7/8 Head Roofing Nail		2	10½	126	..	..	..	17½	Drive nails well in and bend to engage at least 2 strands of lath
Gypsum Lath .....Plaster Board	5	1⅛	13	419	..	..	..	9	Nail 4" apart—5 nails per stud
Wood Lath .....3d Fine	1	1⅛	15	778	..	..	..	7	Per 100 Lath
Plywood ¼ Inch.....4d Common		1½	12½	316	6	9	12		
⅜ Inch .....6d Common*		2	11½	181	..	..	..		
⅜ Inch .....6d Common*		2	11½	181	..	..	..		
½ Inch .....7d Common*		2¼	11½	161	8	12	16		
⅝ Inch .....8d Common*		2½	10¼	106	..	..	..		
¾ Inch .....10d Common*		3	9	69	14	21	28		

When nailing ¼ inch Plywood it will require about 5 pounds per 1000 square feet of 4d finish nails or 9 pounds of 4 inch flat head nails where battens are not used; and about 4½ pounds of 4d flat head nails together with 3 pounds of 4d finish nails where battens are used to cover joints spaced 4 feet 0 inches apart.
*Preferably cement coated nails.

Roofing									
Metal Roll Roofing .....Coldwar Rfg. Nail. ..		1½	..	..	..	..	..		Reroofing over wood shingles
Shingles—Roof									
Asbestos (New Work)....Rfg. Nail		1¼	10	170	..	..	..	1½	Per Square American Colonial No. 607—4 nails per shingle
Asbestos (Old Work).....Rfg. Nail		2	10	110	..	..	..	2½	Per Square American Colonial No. 607—4 nails per shingle
Asphalt (New Work).....Rfg. Nail		1	10	190	..	..	..	6	Per square for Thickbutts
Asphalt (Old Work).....Rfg. Nail		1¾	10	130	..	..	..		
Wood (New Work).....3d Gal.		1¼	13	429	..	..	..	4½	
Wood (Old Work).....Rfg. Nail		2	10	110	..	..	..		
Sheathing									
½ Inch Vapor Seal.....6d Common		2	11½	181	..	..	..	1½"	Roofing Nails ⅞" heads may be used on ½",
¾ Inch Vapor Seal.....8d Common		2½	10¼	106	..	..	..	1¾"	Roofing Nails ⅞" heads may be used on ¾" nail edges 8" apart ⅜" from edge —Intermediate nailing 6" apart.
Siding-Bevel									
½x 4 .....6d Box	1	2	12½	236	..	18	23		
½x 6 .....6d Box	1	2	12½	236	..	15	15		
½x 8 .....6d Box	1	2	12½	236	..	10	12		
¾x10 .....7d Box	2	2¼	12½	210	..	35	45		
¾x12 .....7d Box	3	2¼	12½	210	..	50	60		
Siding Drop									
1x4 .....7d Box	2	2¼	12½	210	22	35	45		
1x6 .....7d Box	2	2¼	12½	210	15	23	30		



Section 7

Glass, Plastic Glazing, Caulking, Glazing

Glass, as a building product, or more correctly, group of building products, has become increasingly important in recent years. This is due partly to the popular favor of homes designed to allow the maximum entry of sunlight; partly due to research that has developed new products to permit the use of glass as a structural material without the necessity of costly and complicated supporting members.

Not so many years ago the building products dealer confined his glass inventory to a stock of window panes, whereas now a very high percentage of dealers have added such items as glass blocks, processed glass panels, double glazed units, structural glass items, mirrors, etc., to their lines of merchandise. Not only has the demand for these products been sufficiently great to warrant their doing so, but because of the steady turn-over, dealers have found these items contribute substantial profits to their overall operation.

FLAT GLASS

General Characteristics.

Today there are many forms of flat glass, each one of which is made to perform a specific function and fill a definite need. There are, however, certain general characteristics which are common to all forms. In greatly simplified terms, all flat glass is composed of sand, soda, and lime, in varying proportions and with other supplementary ingredients depending on the type desired, fused at high temperature, and drawn or cast into flat sheets. All glass is unaffected by moisture, rust, and decay of all kinds. Its polished surface is unmarred by liquids, alkalies, alcohol, and almost all acids. Its finish is hard, lasting, sanitary, easy to clean.

WINDOW GLASS

Window glass has a long past. Its first commercial form probably was what is known as crown glass. This product, far from perfect by today's standards, was made by blowing a glass sphere, or bubble, on the end of a hand blow-pipe. By twirling the pipe while the glass was still soft, the bubble was spread by centrifugal force. From this shape, sheets were cut from the less curved areas and ironed in a hot oven. The result was expensive, contained many defects, produced marked visual distortion, and was never flat.

A step forward was made when the hand method was changed by swinging the bubble in a pit while lung-power was applied to the other end of the blow-pipe. This process resulted in a cylinder which was later reheated, split, and ironed. Cylinder glass was an improvement over crown glass. It gave a higher yield and was of better quality. Also larger sizes were available. But cylinder glass still distorted vision to a high degree because of the ironing process and it, too, was never flat.

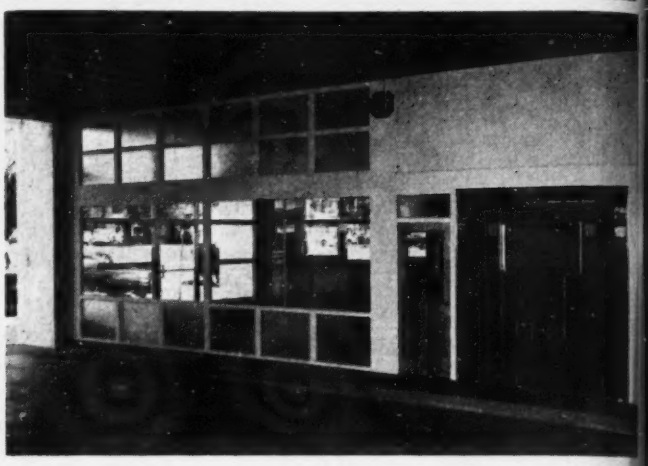
Still later the cylinder process was modified by the introduction of machine blowing. This produced larger cylinders and increased output but the resulting glass was still subject to many of the defects of hand blown cylinder glass. Among other things, it was always bowed. This was especially troublesome to glaziers and installers for the bowed light of glass never laid flat along the sash rabbet. This caused excessive breakage.

By the beginning of the present century, many glass makers had decided that blown glass in any form had too many inherent defects to allow its being converted into window glass of the quality desired. Several men began the struggle to draw window glass in the flat state direct from a tank of molten glass. Foremost among these was Irving W. Colburn. Even Colburn, after exhausting his fortune on 15 different machines over a period of several years, had not achieved the goal.

By the continuous flat-drawing process window glass can be made in much larger quantities than was the case with preceding methods. Furthermore, the quality is very greatly improved and controlled. There are fewer metal defects, such as seeds and bubbles, and less distortion.

Because glass formed by the flat-drawing process travels without interruption through long lehrs, highly controlled chambers in which glass temperatures are slowly and uniformly reduced, it is freer from strain. It, therefore, cuts more easily and breakage is reduced. Old types

THE MACHINE shown above is the feed end of a process that manufactures plate glass in a continuous flow. Raw materials are fed into the tank mechanically, and the molten glass is ejected automatically from the other end.



GLASS of every description is included in this display erected by a Colorado dealer. The unit has stimulated customer interest and created many sales.

of window glass, because they were bowed, were more prone to break in the sash, especially during glazing operations. This troublesome and expensive difficulty has been minimized with modern drawn window glass, due to its remarkable flatness.

WINDOW GLASS SPECIFICATIONS

Classification	Quality	Thickness in Inches	Approximate Wt. Sq. Ft. in Ozs.	Maximum Size Furnished
Window Glass				
Single Strength	"AA," "A," "B"	.087-.100	19.50	90 united in.
Double Strength	"AA," "A," "B"	.118-.133	26	120 united in.
Double Strength	Greenhouse	.118-.133	26	16″ x 18″ 16″ x 24″ 18″ x 20″
1/4″ Heavy Sheet	"AA," "A," "B"	.187-.205	40	50 sq. ft.
1/4″ Heavy Sheet	"AA," "A," "B"	.210-.230	45	60 sq. ft.
Picture Glass 19-23 lts. per in.	"AA," "A," "B"	043-.053	9 to 11	60 united in.
Picture Glass 15-17 lts. per in.	"AA," "A," "B"	.058-.068	12 to 14	60 united in.
Picture Glass 12-14 lts. per in.	"AA," "A," "B"	.070-.080	15 to 17	60 united in.

"AA" quality is specially selected glass for high grade work.

"A" is select glass of superior glazing quality.

"B" is suitable for general glazing purposes.

Greenhouse is below "B" in quality and is available in double strength only in sizes 16″ x 18″, 16″ x 24″ and 18″ x 20″.

United inches are determined by adding the width and the length of the size involved. Thus a light 28″ x 28″ would have 56 united inches.

Packing

Window glass of 100 united inches and less is packed approximately 50 sq. ft. per box; over 100 united inches approximately 100 sq. ft. per box.

Uses

Window glass for glazing windows, doors and storm sash in houses, apartments, and other types of buildings.

Heavy sheet glass for glazing windows and doors where greater strength is required but where slight distortion is not objectionable; for shelving, display cases, window ventilators, and furniture tops.

Picture glass for covering pictures, photographs, maps, and prints.

PLATE GLASS

In the case of window glass, described above, the two surfaces remain unchanged, just as they come from the machine, with a fire polish. Plate glass, on the other hand, is first made into blanks either by being cast in its molten state from large clay pots or rolled in a continuous sheet from a tank. These blanks, which are usually ribbed, are then ground and finally polished on both surfaces with the objective of making them flat and parallel. This results in clear vision and a minimum of distortion.

Qualities

Regular plate is produced in silvering and mirror glazing qualities, which are used in making fine mirrors and for high quality glazing in residences, and in glazing quality, which is used for general glazing purposes. Color clear and colored plate are furnished in quality equivalent to regular plate glass.

Uses

Below are suggested a few examples for the use of plate glass.

1. Regular plate
   1/8″, 13/64″—Small panes, leaded lights, railway coaches, mirrors, etc.
   1/4″—Windows of public and office buildings, residences and apartment buildings, show windows, show cases, street cars, railway coaches, shelving, table and desk tops, large mirrors, etc.
   1/2″—Portlights, long shelves, glass furniture, background for decoration, etc.
   1/2″ to 1 1/4″—Floor, deck and portlights on ships; aquarium tanks, glass furniture, table and desk tops, etc.
2. Color clear plate glass, which is exceptionally clear and colorless, is ideal for picture windows, commercial, refrigerator cases, and mirrors.
3. Colored plate glass can also be used for picture windows. It is very effective for mirrors and for various decorative effects.

Types of Plate Glass

Types of plate glass in general use are as follows:

1. Regular plate
2. Color clear plate
3. Colored plate
4. Heat absorbing plate (to be discussed later)

HEAT ABSORBING PLATE GLASS

Description

Heat absorbing polished plate glass is a product of special chemical composition, pale bluish green in color, and made to absorb a high percentage of the infra-red heat rays of the sun. Part of the absorbed heat is subsequently transferred to the interior, but a considerable portion is given off to the exterior, effecting a net reduction of the solar heat entering through the glass.

JUST OUT!

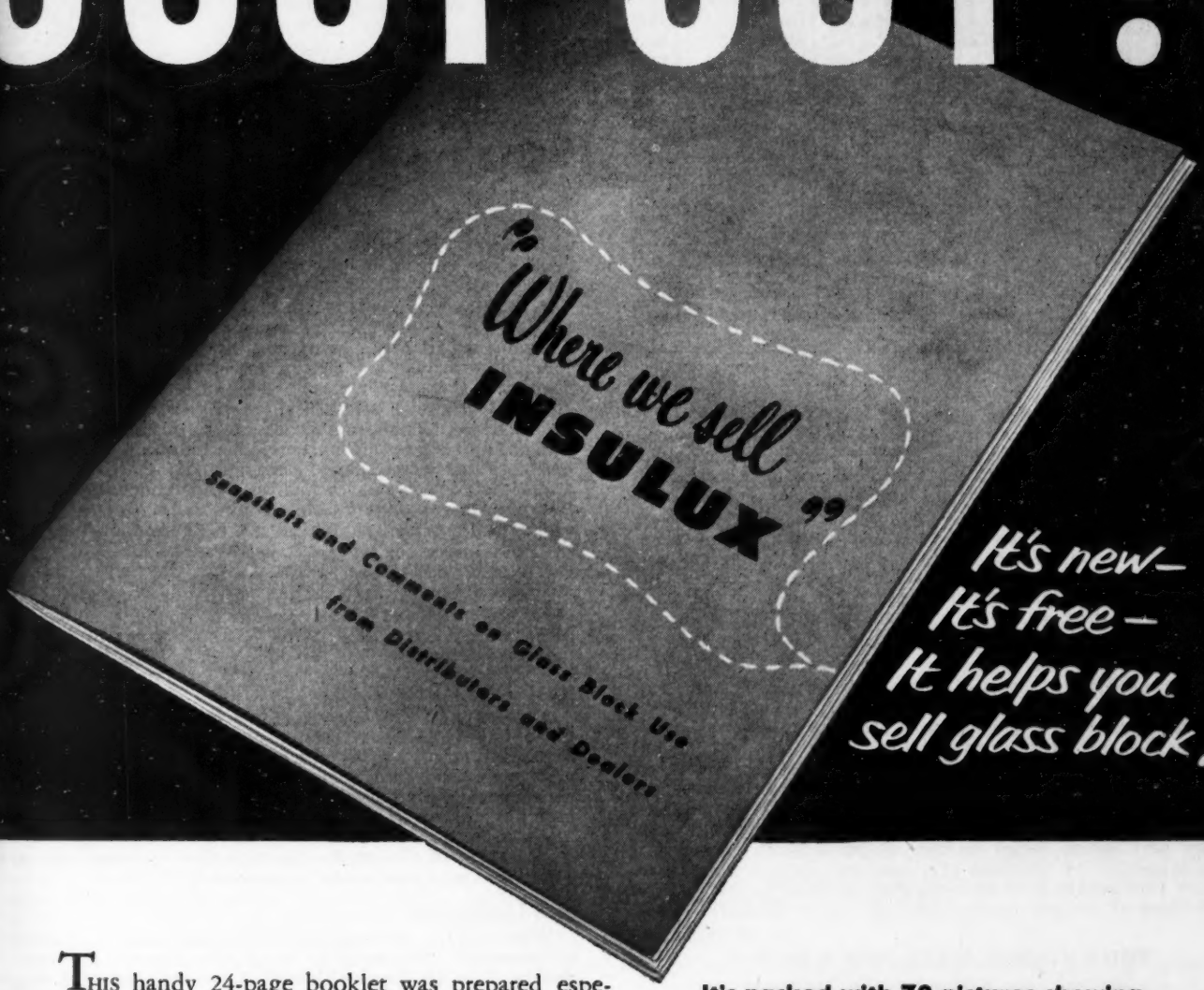


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PLATE GLASS SPECIFICATIONS

Type or Color	Thickness	Thickness Tolerance	Standard Maximum Width and Length	Maximum Size Special Order	Approx. Weight Lbs. Per Sq. Ft.
Regular	3/16"	± 1/32"	72" x 74"	74" x 144"	1.64
	11/64"	± 1/32"	72" x 74"	74" x 144"	2.65
	1/4"	± 1/32"	124" x 170"	124" x 250"	3.27
	5/16"	± 1/32"	100" x 150"	100" x 200"	4.90
	3/8"	± 1/32"	100" x 160"	100" x 200"	6.54
	7/16"	± 1/16"	80" x 140"	100" x 160"	8.17
	1/2"	± 1/16"	80" x 130"	100" x 150"	9.81
	7/8"	± 1/16"	40" x 100"	50" x 100"	11.44
	1"	± 1/16"	40" x 100"	50" x 100"	13.08
	1 1/4"	± 1/16"	40" x 100"	50" x 100"	16.25
Color Clear	3/16"	± 1/32"	40" x 80"	55" x 90"	1.64
	1/4"	± 1/32"	70" x 140"	90" x 140"	3.27
Colors:					
Standard Blue	1/4"	± 1/32"	100" x 140"	110" x 170"	2.86
Medium Blue	1/4"	± 1/32"	100" x 140"	110" x 170"	2.86
Dark Blue	1/4"	± 1/32"	100" x 140"	100" x 170"	2.86
Peach	1/4"	± 1/32"	100" x 140"	100" x 170"	2.86
Golden	1/4"	± 1/32"	95" x 120"	100" x 150"	2.86

Characteristics

Heat absorbing plate glass 1/8" thick excludes 29½% of the total solar radiation, 1/4" thick 38½%, as compared with an exclusion of 9½% afforded by regular plate glass 1/4" thick. These figures are based on the assumption of 50% of the re-radiation of the absorbed heat in the glass to the interior and 50% to the exterior. This reduction of solar heat transmission will produce a cooler atmosphere inside, resulting in lower initial cost for the air conditioning equipment and reduced cost of operation. Heat absorbing plate glass reduces sun glare, and provides light which is restful to the eyes and nerves.

Uses

Heat absorbing plate glass is particularly suited for glazing the windows of office and apartment buildings, hospitals, schools, factories, and other types of buildings where the exclusion of solar heat is a problem. Merchants whose wares are perishable will find heat absorbing plate glass beneficial for show windows. Because of its heat absorbing characteristics, this glass helps protect merchandise such as fruits, vegetables, candy, flowers, and other perishables, helps to keep it fresh much longer. It also is useful for windows of stores and ice cream parlors where refrigerating equipment may necessarily be in line with rays of the sun coming through show windows.

THICKNESSES, SIZES AND WEIGHTS

Thickness	Thickness Tolerance	Standard Maximum Width and Length	Maximum Size Special Order	Approx. Weight Lbs. per Sq. Ft.
1/8"	± 1/32"	40" x 80"	55" x 90"	1.64
1/4"	± 1/32"	70" x 100"	100" x 130"	3.27

TEMPERED PLATE GLASS

Tempered plate glass is made by a process of reheating and sudden cooling, as a result of which the outer surfaces are in a state of high compression while the central portion remains in tension, producing a condition highly resistant to breakage. The process can be applied to both clear and colored plate glass.

Properties

Tempered plate glass is approximately three to five times stronger than regular plate glass in sustaining loads and resisting fracture due to strain, and approximately five to seven times more resistant to ordinary impact and three times more resistant to thermal shock. It is more resistant to bending stresses than ordinary plate glass. A piece of 1/4" tempered glass 42" long and 12" wide can be twisted through an angle of 20° without breaking. Tempered glass retains the same appearance, clearness, hardness and coefficient of expansion as regular plate glass. When its limit of resistance is reached, it does not break like ordinary glass, into jagged pieces, but disintegrates into small crystals.

Special Conditions

Tempered plate glass can be ordered in circles, squares, rectangles and special shapes cut to pattern. It can also be supplied in a variety of edge finishes. However, since it cannot be cut after it is tempered, the exact sizes required must be specified, and intricate designs should be submitted for approval.

Uses

The greater strength of tempered plate glass has resulted in its wide use for visual entrance doors, ship's glazing, steam and oil pressure gauge covers, shelving, furniture, counter tops, show cases, and for enclosures in museums, zoological gardens and aquariums. Its ability to withstand impact makes it especially adaptable for balustrades, stair railings, push and kick plates on doors, windows in gymnasiums and sport arenas, and in jails, hospitals and mental institutions.

Tempered plate glass doors have come into wide use for entrances into stores, commercial buildings, and public structures of all kinds. Since they are, practically speaking, all glass they allow maximum visibility. Consequently they are especially advantageous in retail establishments.

Tempered plate doors cannot be fitted or altered on the job. This means that they must be made complete at the factory in a wide range of sizes and to quite exact dimensions. Necessary hardware, in a variety of types and finishes must also be attached at the factory. Because of these factors it is impracticable to include full information on tempered plate doors in a manual of this size. Your glass distributor has complete data on measuring, ordering and installation. Call on him whenever you see an opportunity to sell tempered plate glass doors.

MIRRORS

The growing use of plate glass mirrors makes them increasingly important items to the lumber and building material dealer.

Qualities

Mirrors are graded according to the quality of plate glass used. "A"—(silvering quality) used only for the finest mirrors. No. 1 (mirror glazing quality) used for all types of selected mirrors. No. 2 (glazing quality) used for all other plate glass mirrors which are termed "commercial" mirrors.

These standards correspond to those established by the Department of Commerce through the National Bureau of Standards as Commercial Standard CS27-36.

Size Limitations

When facing wall areas with large mirror sections, it is generally advisable to keep the size of the sections within 7 x 12 feet, although larger dimensions can be furnished for special conditions. Larger wall areas may also be covered with a series of adjacent mirrors.

Uses

Mirrors are playing an increasingly important part in modern decoration and design. Architects and designers have found that mirrors bring increased light, beauty, sparkle and spaciousness into residences, hotels, apartment houses and public buildings.

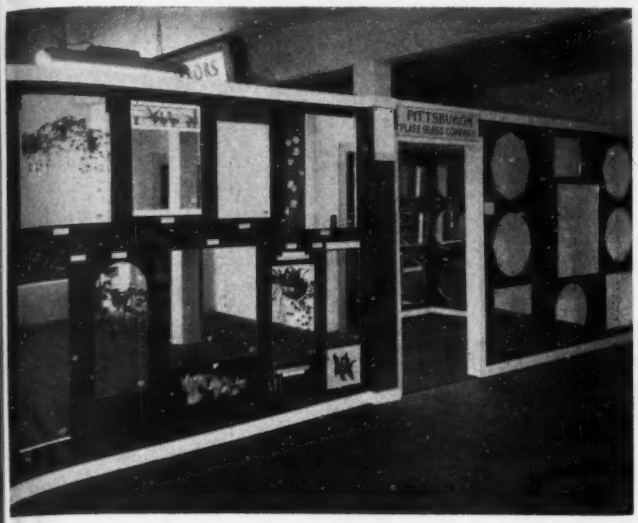
A recent use of mirrors is to double the apparent size of a room or space by facing one wall or two adjoining walls with large mirror sections, attached with rosettes or mastic.

Circular mirrors for dining rooms, fireplace-to-ceiling mirrors for living rooms, full length, plate glass mirrors for bedrooms and dressing rooms, built-in-mirrors for smart powder rooms—all aid in introducing charm and dignity into modern homes.

Commercial uses for mirrors are wide and varied—up-to-the-minute department stores and showrooms use large areas of mirrored surfaces for background effects, triple mirrors in clothing sections, overhead mirrors for decorative purposes. Mirrored walls and ceilings are used extensively in bars, restaurants, clubs, theaters, etc. and add decorative beauty and spaciousness where room is limited.

TRANSPARENT MIRRORS

Durability and permanence are outstanding qualities of transparent mirrors—a new product using evaporated chromium alloy for "one-way-mirror" installations.



MIRRORS are a necessary item in every home. They serve both a functional and a decorative purpose, and have a use in all rooms. Modern trend is toward installing mirrors in a permanent setting, rather than hanging them as pictures in frames.

PICTURE WINDOWS really bring the outdoors right into this refreshing lake home. The glass is double-glazed, reducing the heat loss and condensation.

With a light transmission of approximately 15% and a light reflection from the mirrored side of about 45%, the specially treated plate glass when properly installed serves as a mirror from the front, but is transparent when viewed from the back.

When a transparent mirror is installed between two rooms, one of which is brightly lighted and the other dimly lighted, an observer in the dark room can see into the lighted one, but the glass has the appearance of an opaque mirror in the illuminated room. The perfection of the performance is governed by the difference in brightness between the two rooms. The mirrored side should be installed toward the room into which a view is desired.

Sizes

Transparent mirrors can be obtained in ½" plate glass and in sizes up to 30" x 40".

Uses

The following suggested uses for transparent mirrors are a few of many possible applications:

In residence entrance doors, hospital observation windows (particularly psychiatric), show windows, nursery doors in residences, instrument manufacturing (used in cameras and other scientific instruments), night clubs and taverns, security windows in government offices, banks, post offices, FBI offices, police departments, private offices, factories and institutions, and colleges and universities (psychology departments). The mirrors also are suitable for novel advertising signs and show windows.

DOUBLE GLAZED UNITS

One of the most significant glass developments in recent years is double glazed insulating glass. Because it is newer than other glass products but more because it will unquestionably become increasingly important to the building industry, insulating double glazed units will be given a more detailed treatment than other glass products in this manual.

Description

Insulating double glazed units constitute a factory-built transparent glass unit composed of two or more lights of glass separated by ¼" or ½" of dehydrated captive air, hermetically sealed around the edges at the factory.

Manufacture

These units can be furnished in squares, rectangles or straight edge shapes, providing angles on such shapes are not too acute. It is generally fabricated to ordered sizes, but manufacturers have developed certain standard sizes.

Uses

Double glass is practical for glazing of wood or metal windows and doors in homes, apartments, schools, hospitals and other structures requiring heating or air conditioning.

Heat Loss Transmission

Double glazed units provide a high resistance to heat flow, varying with the number of panes and the thickness of the air space used. In summer the low heat transmission coefficient reduces the load on air conditioning systems. In winter it saves heat.

The greater efficiency of double compared with single glazing makes it possible to use larger windows to keep the cost of fuel constant. It is said that a house could have 115 square feet of double glazed instead of 40 square feet of single glazing without any increased loss of heat. Double glazing permits the influx of a larger amount of the solar heat through exterior glazing of buildings without a prohibitive compensating loss by conduction. By combining various types of heat-absorbing and colored glass in the fabrication of double glazing, the amount and quality of light transmission may be controlled, if this is desirable.

Extra Strength Conditions

Where extra strength in glazing is required to withstand high pressures which would rupture standard plate glasses, insulated double glazed units can be manufactured from ¼" tempered plate glass.

Standard Sizes

The new standard sizes for double glazing recently have been developed in cooperation with leading manufacturers of wood and steel sash in answer to requests from many architects, designers and builders. (See chart for full details.) These standard size units comply with the American Standards Association 4" modular construction.

There are numerous advantages to specifying standard sizes. Manufacturers of wood sash have developed standard picture window frames and sash units using them. Glass distributors and wholesale sash and door jobbers will carry warehouse stocks of these units, thus making them more readily available. Builders can incorporate standard sizes in their specifications. Replacements and duplications of orders will be handled more quickly.

Heat Transmission Table

The over-all heat transmission coefficient U varies with the ranges of temperature at which the coefficient is determined. For most practical heat loss calculations, coefficient U can be the value determined at 10 degrees outside temperature, 70 degrees inside temperature, 15 mph outside air velocity, 0.25 mph average inside air velocity.

Picture Windows—Standard Sizes

The new standard units are being manufactured in a wide range of sizes, readily adaptable by builders for new construction and remodeling.

The sizes for picture windows in single lights, double hung wood window units and residential steel sash casements are shown on the chart.

STRUCTURAL GLASS makes an appealing facing material for store exteriors. Here the combination of large plate windows and structural glass walls make an effective, modern consumer store front.

LUMBER DEALERS, themselves have widely used structural glass for both new and remodeled showrooms. Because the glass is permanent and easy to clean the store front stays fresh and attractive.

STRUCTURAL GLASS

Structural glass is opaque colored glass, 11/32" or more in thickness, which can be applied to walls and other vertical or horizontal areas. It offers a practical means of attaining unusual beauty that is preserved by characteristics inherent in glass. Panels provide a more pleasant appearance than areas made up of many smaller pieces. Joints are so narrow as to hardly be noticeable.

Characteristics

Structural glass is opaque, homogeneous, non-absorbent and impervious to moisture. Possesses high tensile and crushing strength, and is highly resistant to absorption. It will not warp, swell or craze. Liquids in common use cannot penetrate it, and it will not absorb liquids or gases that give off unpleasant odors. It is not easily stained and will not burn. It is difficult to write or mark upon and is easily cleaned by the whisk of a damp cloth—or in extreme cases by the application of soap and water. Because of these characteristics structural glass has won the favor of builders and home owners.

The color of structural glass is not a coating—it is all through the glass, providing a deep lustrous tone that is unharmed by weathering, steam, water or other elements that cause deterioration of less stable surfaces. Structural glass bathroom walls are the pride of home owners after many years of subjection to splashing and washing. The structural glass colors were selected after much study to attain shades that blend well with each other. These colors harmonize beautifully with standard colors used by kitchen and bathroom fixture manufacturers. And the colors are in shades that blend readily with drapes, curtains and other home decoration elements.

Size Limitations Recommended

For the maximum of beauty, strength and efficiency, structural glass panels should be restricted to the following range of sizes according to the type of installation: bathroom and kitchen walls, 8" x 12" to 24" x 24"; interior walls for commercial buildings up to 30" x 36"; storefront facing, 6 square feet; toilet partitions, up to 60" x 60".

Installation

Structural glass can be applied over any relatively flat hard wall surface that is not subject to warping. (It should not be installed on wood.)

It is installed in interiors with mastic and 1/64" joints buttered or pointed with joint cement. Pointing is usually sufficient but for shower partitions and wainscoting, the joints should be buttered and pointed. For exterior installation, it is attached with asphaltic mastic and supported at the lower edge adjoining the sidewalk and at horizontal joints by concealed shelf angles or by metal angles having facing shapes that overlap. All joints on exteriors should be 1/16", buttered and pointed with joint cement. All horizontal joints should be cushioned with adhesive cork tape.

Direct contact with metal, concrete or other hard substances should be avoided and some kind of cushioning material should always be provided. Butting edges should be ground and chamfered, exposed edges polished and chamfered or finished with quarter round. Avoid sharp mitered corners. Corners subjected to rough usage should have metal guards. The extremities of a storefront installation should be protected with a suitable metal member. Top courses should have projecting member of metal or other material provided with a drip. Distance from background wall or surface to face, 5/8" to 3/4" for 11/32"; 3/4" to 7/8" for 7/16". Your glass distributor has details and specifications for structural glass construction available upon request, also booklets dealing with storefronts, theaters, restaurants, table tops, counters and soda fountains, bathrooms, kitchens, etc.

Uses

The applications of structural glass are as general as the desire for long-lasting beauty. Facing of storefronts and exteriors of buildings. Lobbies of hotels and office buildings. Wainscoting for partitions, corridors, washrooms, toilets and shower baths in public buildings. In homes—for wainscoting of bathrooms, kitchens, breakfast rooms as well as work table tops and splash backs.

PATTERNED & WIRE GLASS

Various types of patterned and wire glass have been handled by lumber and building material dealers for many years. At one time there were relatively few patterns, which were used rather indiscriminately, chiefly to obscure vision. Since then, however, great strides have been made in the design and application of patterned glasses. There is now a pattern or type of glass scientifically designed to meet every need of light transmission and diffusion. Also many new patterns have been introduced to produce a modern, decorative effect.

In addition to the plain fire finish, with which the glass emerges from the forming rolls, patterned glasses can be obtained with other types of surface processing:

Frosting—primarily a functional treatment of the glass surfaces achieved by acid etching to improve the distribution of light.

Sandblasting—another surface treatment. This also enhances obscurity of the glass and spreads light in a circular pattern.

Sandblasting on one surface reduces light transmission about 16%, and 20% to 30% when applied to both surfaces, depending on type of glass.

Heat Tempering

Most patterns can be heat-tempered to resist certain types of impact and thermal shock.

WIRE GLASS

Several of the patterns already mentioned can be obtained in wire glass to be used where extra strength and a fire retardant glass is required. Wire glass is made by a continuous rolling process in which the wire, previously chromium dipped to insure clean wire and to improve adhesion to the glass, is embedded as closely to the center of the glass as possible.

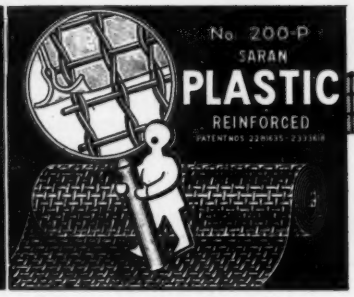
Make YOUR store Headquarters for...

R-V-LITE® and VIMLITE®

ALL-PURPOSE

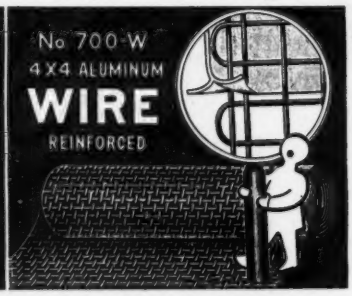
WINDOW MATERIALS

150′ roll, 36″ wide. Wt. 14 lbs.
50′ roll, 36″ wide. Wt. 5½ lbs.

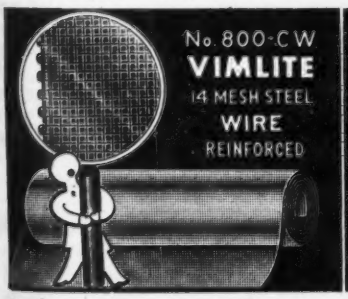


150′ roll, 36″ wide. Wt. 14½ lbs.
50′ roll, 36″ wide. Wt. 6½ lbs.

150′ roll, 36″ wide. Wt. 27 lbs.
50′ roll, 36″ wide. Wt. 11 lbs.



150′ roll, 36″ wide. Wt. 15½ lbs.
50′ roll, 36″ wide. Wt. 6½ lbs.



100′ roll, 28″–33 lbs., 36″–42 lbs., 48″–57½ lbs.
50′ roll, 28″–18 lbs., 36″–22 lbs., 48″–29 lbs.

150′ roll, 36″ wide. Wt. 44 lbs.
50′ roll, 36″ wide. Wt. 15 lbs.

GET ACQUAINTED with the new R-V-LITE STORM PANES
Newest addition to this fast-selling window material family. Easy-to-install panes of Clear Vinyl Plastic or Cotton Reinforced R-V-LITE . . . 78″ x 36″ pane, packed complete with waterproof framing strips, nails and clear instructions.

No. 12 SP Cotton Reinforced STORM PANE
Packed 12 to ctn. Individually wrapped in printed envelopes.

No. 36 SP Clear Vinyl STORM PANE
Packed 36 to ctn. with convenient wrapping envelopes.

Ask your Wholesaler for complete catalog sheets and price schedules

Exclusive Manufacturers of R-V-LITE
ARVEY CORPORATION
SINCE 1905
3462 NORTH KIMBALL AVENUE • CHICAGO 18, ILLINOIS

R-V-LITE
All-Purpose WINDOW MATERIALS
COTTON
PLASTIC
WIRE
WAX
Give this attractive floor fixture a prominent spot! Displays the complete line, stocks ample reserve. Makes cutting quick and easy. Sells all R-V-LITE types for you!

All-metal 8-roll capacity

FLOOR FIXTURE

Dresses up your store. Handsome, customer-attracting, self-selling dispenser tops anything in the field. Offers free, colorful folders for serve-yourself advertising. Creates a complete R-V-LITE department in 40″ x 25″ floor space.

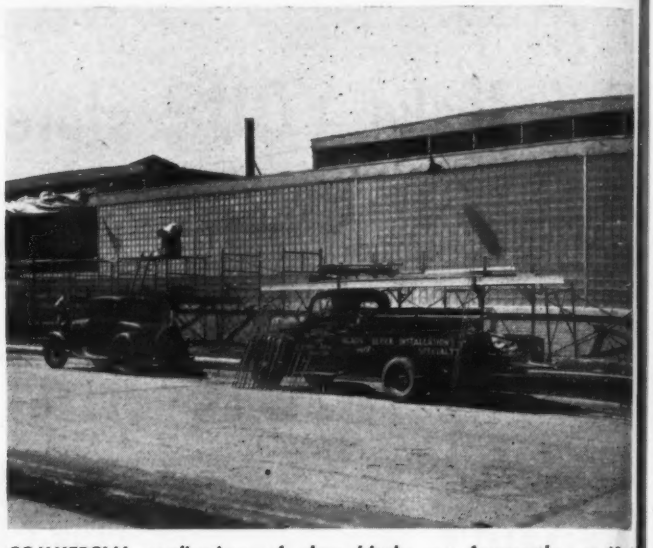
NEW R-V-LITE MERCHANDISING FLOOR FIXTURE OFFER No. R-V 550-D Includes

1 Sturdy Steel FLOOR MERCHANDISING FIXTURE
1 150-ft. Roll No. 100-C
1 50-ft. Roll No. 200-P
1 50-ft. Roll No. 300-CW
1 150-ft. Roll No. 700-W
1 50-ft. Roll No. 800-CW

ALL ROLLS 36″ WIDE

Approx. wt. complete — 118 lbs.

GLASS blocks in this home provide soft lights for a modern dining room. Various size blocks offer a decorative, interesting effect.



COMMERCIAL applications of glass blocks are frequently specified during factory modernizations. The blocks improve lighting conditions for workers and require minimum upkeep.

The rules of the National Board of Fire Underwriters limit the size of wire glass which can be glazed in openings exposed to fire hazard. In no case shall the unsupported area of the glass measure more than 48 inches in either dimension or exceed 720 square inches. Typical maximum sizes would be 15 x 48, 18 x 40, 20 x 36, and 24 x 30.

Polished wire glass is ground and polished on both surfaces by a process similar to that used in making plate glass. As a result, maximum vision and minimum distortion are obtained.

PROCESSING

Most types of flat glass can be obtained with various types of processing. One or both surfaces may be sandblasted—either over-all or to designs—and in several textures and depths. The same applies to structural glass which, in addition, may be inlaid with glass of another color.

Glass may be obtained with a variety of edge finish such as ground, ground and polished, penciled (half round), mitered and bevelled.

Glass may also be obtained cut to pattern shapes, drilled, notched, and with finger pulls.

With the exception of tempered glass, which must have all processing done at the factory before heat treating, most processing is performed by the glass distributor. Your glass distributor can give you detailed information on processing. He can also furnish you information on measuring, estimating, ordering and installing bent glass. All forms of flat glass, except tempered plate, can be bent, but this is a specialized field requiring your glass distributor's expert advice.

CUTTING

Plate glass in larger sizes and several other types of glass will undoubtedly be ordered cut to size from your glass distributor. But window glass and some patterned glass will be cut to size by the lumber and building material dealer. The manner in which this cutting operation is carried out affects profits. Here are some suggestions:

Carry an adequate assortment of sizes in window glass. This reduces cutting loss or wastage. Maintain easily accessible bins clearly marked as to size and keep them as well filled as you can. This will make it possible and convenient to select the most economical size from which to cut the required light.

Never try to cut glass on an uneven or unstable, makeshift surface. Have a good, firm, flat cutting table, reserved for glass cutting only. The top should be covered with heavy felt or carpeting. Keep your table clean at all times; brush off small particles of glass to prevent their scratching the light you are cutting.

Secure good glass-squares and hooked rules. Keep them hung up where they will not be damaged when not in use. Use the best wheel cutter you can buy. It will save you money. Grasp the cutter firmly and make a clean straight cut with a free motion and with the bottom edge of the cutter parallel with the surface of the glass. Judge your cut by the "sing" of the cutter so as to get the right pressure. Never run the cutter over the same spot twice. Don't make a "white" cut nor one which flakes.

Snap the glass, after cutting. If the cut is near the edge, use a pair of good glass pliers—not mechanics pliers—keeping the lips of the pliers close to the cutter mark.

When you have finished, check your light for correct size, return tools to proper places, put cutter in can or jar of light oil. If cutter has started skipping break the handle in two and throw it away so that it can never be used again and cause breakage.

LAMINATED SAFETY GLASS

Many lumber and building material dealers, especially in those localities not being served by auto glass dealers, have built up a profitable business in laminated safety glass. They have equipped themselves to install safety glass at retail or for nearby auto repair concerns.

Safety glass is a glass unit composed of two lights of glass laminated with an interlayer of transparent plastic by a process involving extreme heat and pressure.

A series of improvements have marked the development of safety glass, chiefly involving the plastic interlayer. This plastic has unusual strength, elasticity, and adhesion.

When safety glass is fractured, the particles of glass tend to adhere to the plastic, affording more protection against flying glass fragments.

Types

In the table below various types of laminated safety glass are described as follows:

Thin safety glass is made up from two lights of picture glass.

S.S. from two lights of single strength window glass.

Combination from one light of single strength and one light of double strength.

D.S. from two lights of double strength.

Safety plate from two lights of thin plate glass.

Heavy Safety Plate: 2 ply thickness — 11/32", 3/8", 13/32", 1/2" 5/8" 7/8" 1"; maximum size 60" x 74"; weights ranging from 4.47 to 13 lbs. per sq. ft.; thickness toler-

Kinds of Glass	SAFETY GLASS		Thickness Tolerance	Maximum Size	Net Weight Lbs. Per Sq. Ft.
	Number of Lights	Thickness of Safety Glass			
Thin Safety Glass	2	5/32"	−1/32"	Up to 7 sq. ft.	1.75
S.S. Safety Glass	2	7/32"	±1/32"	Sizes	2.63
Combination Safety Glass (S.S. & D.S.)	2	11/64"	±1/32"	up to 15 sq. ft.	3.00
D.S. Safety Glass	2	1/4"	±1/32"	of area	3.05
Safety Plate	2	1/4"	±1/32"	60" x 74"	3.05

1" Thick Units *Standard Sizes of Thermopane* ½" Thick Units

(2 Panes ¼" Polished Plate With ½" Air Space)

Sash Manufacturer	Window Style	Sash Opening Width	Sash Opening Height	Glass Size Width	Glass Size Height
Any manufacturer shown below can provide picture window sash without flanking units.	Picture Window Alone			Use any size shown in this column	
Window walls can be constructed by using a series of Picture Window sash separated by mullions.	Window Wall	Glass sizes shown are for 8' and 8½' ceiling heights respectively, allowing 1'-6" from floor to sill and 1'-0" from head to ceiling		42"	x 66"
				56½"	x 66"
				64½"	x 66"
				72½"	x 66"
				84"	x 66"
				96"	x 66"
				42"	x 72"
				84"	x 72"
				96"	x 72"
Andersen Corp. Bayport, Minn. All sizes except * and ‡	Standard Wood Picture Window Units with Flanking Casements	(Including Casements) 6'-5¼"	x 3'-2⅛"	35½"	x 36"
Farley & Loetscher Mfg. Co. Dubuque, Iowa Only sizes marked ‡		8'-1"	x 3'-2⅛"	55¼"	x 36"
		9'-8¾"	x 3'-2⅛"	75"	x 36"
Roisersen Co. Pella, Iowa Only sizes marked *		6'-5¼"	x 4'-2⅛"	35½"	x 48⅛"
		8'-1"	x 4'-2⅛"	55¼"	x 48⅛"
		9'-8¾"	x 4'-2⅛"	75"	x 48⅛"
		6'-5¼"	x 5'-2⅛"	35½"	x 60⅜"
		8'-1"	x 5'-2⅛"	55¼"	x 60⅜"
		9'-8¾"	x 5'-2⅛"	75"	x 60⅜"
		*4'-3"	x 4'-4"	*48"	x 48"
		*6'-3"	x 4'-4"	*72"	x 48"
		*4'-3"	x 5'-4"	*48"	x 60"
		*6'-3"	x 5'-4"	*72"	x 60"
		‡5'-0"	x 5'-10"	‡56½"	x 66"
		‡5'-8"	x 5'-10"	‡64½"	x 66"
		‡6'-4"	x 5'-10"	‡72½"	x 66"
Andersen Corp. Bayport, Minn.	Standard Wood Picture Window Units with Flanking Double Hung Sash	4'-4"	x 4'-2"	48½"	x 46"
Anderson Mfg. Co., Inc. Owensboro, Ky.		5'-0"	x 4'-2"	56½"	x 46⅛"
Binswanger and Co., Inc. Richmond 21, Va.		5'-8"	x 4'-2"	64½"	x 46"
Brown & Graves Akron, Ohio		6'-4"	x 4'-2"	72½"	x 46"
Wm. Cameron & Co. Waco, Texas		4'-4"	x 4'-6"	48½"	x 50"
Carr Adams & Collier Co. Dubuque, Iowa		5'-0"	x 4'-6"	56½"	x 50"
Chicago & Riverdale Lbr. Co. Chicago, Ill.		5'-8"	x 4'-6"	64½"	x 50"
Cole Mfg. Co. Memphis, Tenn.		6'-4"	x 4'-6"	72½"	x 50"
Curtis Companies, Inc. Clinton, Iowa	(Continued from column at left)	7'-0"	x 4'-6"	80½"	x 50"
Exchange Lumber & Mfg. Co. Spokane, Wash.	Edward Hines Lbr. Co. Chicago, Ill.	8'-4"	x 4'-6"	96½"	x 50"
Farley & Loetscher Mfg. Co. Dubuque, Iowa	Huttig Mfg. Co. Muscatine, Ia.	4'-4"	x 5'-2"	48½"	x 58"
Harris Bros. Lbr. Co. Chicago, Ill. (Continued next column)	Huttig Sash & Door Co. St. Louis, Mo.	5'-8"	x 5'-2"	64½"	x 58"
	Malta Mfg. Co. Malta, Ohio	6'-4"	x 5'-2"	72½"	x 58"
	Roach & Musser Co. Muscatine, Ia.	7'-0"	x 5'-2"	80½"	x 58"
	Rock Island Millwork Rock Island, Ill.	8'-4"	x 5'-2"	96½"	x 58"
	Weather-Seal, Inc. Barberton, Ohio	10'-0"	x 5'-2"	116½"	x 58"
		5'-0"	x 5'-10"	56½"	x 66"
		5'-8"	x 5'-10"	64½"	x 66"
		6'-4"	x 5'-10"	72½"	x 66"
Aluminum Window Corp. Garden City, L. I. Note: First 3 sizes in this group also available in wood sash.	Aluminum Sash Picture Window Units	4'-0"	x 4'-8"	46⅛"	x 52½"
		5'-0"	x 4'-8"	58⅛"	x 52½"
		6'-0"	x 4'-8"	70⅛"	x 52½"
		4'-0"	x 5'-0"	46⅛"	x 56½"
		5'-0"	x 5'-0"	58⅛"	x 56½"
		6'-0"	x 5'-0"	70⅛"	x 56½"
Adams & Westlake* Elkhart, Ind.	Standard Aluminum Picture Window Units with Flanking Double Hung Sash	3'-2"	x 4'-2"	35½"	x 48⅛"
Capples Products Co. Maplewood, St. Louis, Mo.		4'-4"	x 4'-6"	48½"	x 50"
General Bronze Corp.* Garden City, L. I.		5'-0"	x 4'-6"	56½"	x 50"
Sterling Windows, Inc. New Castle, Ind.		5'-8"	x 4'-6"	64½"	x 50"
* Indicates These Firms Manufacture to Order		6'-4"	x 4'-6"	72½"	x 50"
		7'-0"	x 4'-6"	80½"	x 50"
		5'-8"	x 5'-2"	64½"	x 58"
		6'-4"	x 5'-2"	72½"	x 58"
		7'-0"	x 5'-2"	80½"	x 58"
Wm. Bayley Co. Springfield, Ohio	Steel Sash Picture Window Units				
Bliss Steel Products Co. E. Syracuse, N. Y.					
Case Steel Products Co. Chicago, Ill.		4'-5⅛"	x 4'-2⅜"	50⅜"	x 47¾"
Detroit Steel Prod. Co. Detroit, Mich.		4'-5⅛"	x 5'-3"	50⅜"	x 60⅛"
Michael Flynn Mfg. Co. Phila., Pa.		5'-9⅜"	x 4'-2⅜"	66⅜"	x 47¾"
Hopes' Windows, Inc. Jamestown, N. Y.	(Continued from column at left)	5'-9⅜"	x 5'-3"	66⅜"	x 60⅛"
Meker Bros. St. Louis, Mo. (Continued next column)	J. S. Thorn Co. Phila., Pa.				
	Truscon Steel Co. Youngstown, Ohio				
Solar Air-Flo, Inc. Elkhart, Ind.	Standard Wood Picture Window Units with Louvres (3)	39¾"	x 53¾"	35½"	x 36"
		39¾"	x 65¾"	35½"	x 48⅛"
		39¾"	x 77¾"	35½"	x 60⅜"
		49⅞"	x 65¾"	46"	x 48⅛"
		49⅞"	x 74¾"	46⅛"	x 56½"
		49⅞"	x 89¾"	46"	x 72½"

Thermopane made with window glass should not be turned when set . . . specify width first. All *Thermopane* units made of polished plate glass can be installed with either dimension set vertically. Window openings will vary according to individual sash manufacturer's specifications. Therefore, manufacturers should be contacted for full information regarding their units.

(2 Panes ⅛" Polished Plate, or DSA Window Glass, With ¼" Air Space)

Sash Manufacturer	Window Style	Sash Opening Width	Sash Opening Height	Glass Size Width	Glass Size Height
Chicago & Riverdale Lbr. Co. Chicago, Ill. Exchange Lbr. & Mfg. Co. Spokane, Wash. Harris Bros. Lbr. Co. Chicago, Ill. Ed. Hines Lbr. Co. Chicago 8, Ill.	Double Hung Wood Windows (2-Light)	2'-0"	x 4'-2"	20"	x 22"
		2'-4"	x 4'-2"	24"	x 22"
		2'-4"	x 4'-6"	24"	x 24"
		2'-8"	x 4'-6"	28"	x 24"
		3'-0"	x 4'-6"	32"	x 24"
		3'-4"	x 4'-6"	36"	x 24"
		3'-8"	x 4'-6"	40"	x 24"
		4'-0"	x 4'-6"	44"	x 24"
		2'-4"	x 5'-2"	24"	x 28"
		2'-8"	x 5'-2"	28"	x 28"
		3'-0"	x 5'-2"	32"	x 28"
		3'-4"	x 5'-2"	36"	x 28"
		3'-8"	x 5'-2"	40"	x 28"
		4'-0"	x 5'-2"	44"	x 28"
Chicago & Riverdale Lbr. Co. Chicago, Ill. Exchange Lbr. & Mfg. Co. Spokane, Wash. Harris Bros. Lbr. Co. Chicago, Ill. Ed. Hines Lbr. Co. Chicago 8, Ill.	Double Hung Wood Windows (4-Light)	2'-0"	x 4'-2"	20"	x 10⅜"
		2'-4"	x 4'-2"	24"	x 10⅜"
		2'-4"	x 4'-6"	24"	x 11⅜"
		2'-8"	x 4'-6"	28"	x 11⅜"
		3'-0"	x 4'-6"	32"	x 11⅜"
		3'-4"	x 4'-6"	36"	x 11⅜"
		3'-8"	x 4'-6"	40"	x 11⅜"
		4'-0"	x 4'-6"	44"	x 11⅜"
		2'-4"	x 5'-2"	24"	x 13⅜"
		2'-8"	x 5'-2"	28"	x 13⅜"
		3'-0"	x 5'-2"	32"	x 13⅜"
		3'-4"	x 5'-2"	36"	x 13⅜"
		3'-8"	x 5'-2"	40"	x 13⅜"
		4'-0"	x 5'-2"	44"	x 13⅜"
Roisersen Co. Pella, Iowa	Wood Casements	23"	x 40"	20"	x 36"
		23"	x 52"	20"	x 48"
		23"	x 64"	20"	x 60"
		27"	x 28"	24"	x 24"
		27"	x 36"	24"	x 32"
		27"	x 40"	24"	x 36"
		27"	x 52"	24"	x 48"
Bliss Steel Products Co. E. Syracuse, N. Y. Druwhit, Inc. Los Angeles, Cal. Michael Flynn Mfg. Co. Philadelphia, Pa. Hopes' Windows, Inc. Jamestown, N. Y. Soule Steel Co. Los Angeles, Cal. Truscon Steel Co. Youngstown, O.	Residential Steel Casements	For detailed information about omitting muntins contact any L-O-F district office		T-1 15⅛"	x 35⅛"
				T-2 15 ⅞"	x 36⅛"
				T-3 15⅛"	x 47½"
				T-4 15⅛"	x 48¾"
				T-5 17 ⅛"	x 36⅛"
				T-6 17-⅛"	x 48¾"
Fabrow Mfg., Inc. Toledo 9, Ohio (Wood) Fred Reuten, Inc. Closter, N. J. (Wood)	Panel Window System	45¼"	x 25¼"	45⅛"	x 25½"
(Ventilator Sections) (Aluminum) A. B. C. Steel Equipment Co. New York 10, N. Y. (Wood) Fabrow Mfg., Inc. Toledo 9, Ohio	Ventilator for Above	45¼"	x 25¼"	42½"	x 22½"
Solar Air-Flo, Inc. Elkhart, Ind.	Panel Wall with Louvres	49¾"	x104"	45½"	x25½"

Note: Some representative sash manufacturers of different styles of windows are listed on this page. This listing does not purport to be a complete listing of manufacturers and styles, nor does it necessarily include all styles and sizes made by each of the listed manufacturers.

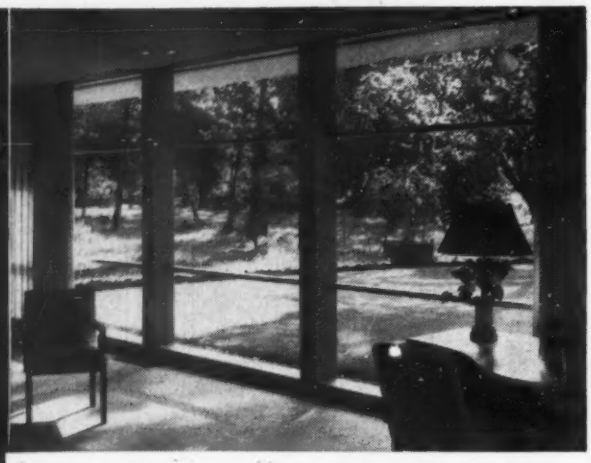
STANDARD SIZES FOR FARM SERVICE BUILDINGS

These ⅞"-thick Thermopane units for farm buildings are made with ⅜6" sheet glass and ½" air space only. They are stenciled for use in farm buildings.		½" Air Space and ⅜6" Sheet Glass only	
		36"	x 44"
		36"	x 60"
		40"	x 68"
These ½"-thick units for farm buildings are made with double strength A-quality window glass and ¼" air space.	Studs 24" on center for fixed windows with stops nailed to studs	Five Sizes Below ¼" Air Space and DSA Glass only	
		22"	x 28"
		22"	x 36"
Steel sash manufactured by Clay Equipment Corp., Cedar Falls, Iowa. Thermopane units ½"-thick made only with double strength A-quality window glass and ¼" air space.		32"	x 36"
		32"	x 36"

		31½" x 35½"
		30⅛" x 22" (Top) Tilting 31½" x 11⅜" (Bottom) Fixed

LIBBEY•OWENS•FORD GLASS COMPANY TOLEDO 3, OHIO

L·O·F GLASS



L·O·F Polished Plate Glass provides clear visibility through the picture window of this beautiful California home.

POLISHED PLATE GLASS. For fine Picture Windows and mirrors there is no substitute for Polished Plate Glass. This glass is ground and polished to make both sides flat and parallel, thus providing clear vision with a minimum of distortion. This flatness and freedom from distortion are two of the reasons why Polished Plate Glass is used for display windows in stores and shops.

USES. 1/8", 13/64"—Small panes, leaded lights, mirrors, etc. 1/4"—Windows of public and office buildings, residences and apartment buildings, storefronts, mirrors, showcases, shelving, push plates, furniture tops, etc.

3/8"—Large show windows, stair rail panels, shelving, table and desk tops, large mirrors, etc.

1/2"—Long shelves, glass furniture, background for decoration, etc.

1/2" to 1-1/4"—Aquarium tanks, glass furniture, table and desk tops, etc.

CHART FOR SPECIFYING
L·O·F POLISHED PLATE GLASS

Thickness	Standard Maximum Width and Length	Maximum Size Special Order	Approx. Weight Lbs. per Sq. Ft.
1/8"	72" x 74"	74" x 144"	1.64
13/64"	72" x 74"	74" x 144"	2.65
1/4"	124" x 170"	124" x 250"	3.27
3/8"	120" x 150"	120" x 200"	4.90
1/2"	100" x 150"	100" x 200"	6.54
5/8"	80" x 140"	100" x 160"	8.17
3/4"	80" x 130"	100" x 150"	9.81
7/8"	40" x 100"	50" x 100"	11.44
1"	40" x 100"	50" x 100"	13.08
1 1/4"	40" x 100"	50" x 100"	16.25

For data on colored polished plate glass, *Color Clear** Polished Plate Glass, Heat Absorbing Plate Glass and various types of edge finishes, consult your L·O·F Distributor.

L·O·F TUF-FLEX* TEMPERED PLATE GLASS

Recommended where resistance to impact or thermal shock is desired. It looks the same as regular plate glass. *Tuf-flex* is used for frameless glass doors, balustrades, stair railings, push and kick plates, and for glazing gymnasium windows. Exact sizes should be specified as *Tuf-flex* cannot be cut or drilled after tempering.

VITROLITE* is an opaque structural glass with a hard, non-absorbent, abrasion-resistant surface. It will not warp, swell, shrink or craze. Easily cleaned with a damp cloth. Colors—sky blue, cadet blue, light gray, dark gray, jade, cactus green, alamo tan, taupe, white, red and black. All colors in 11/32" thickness; white and black also in 7/16" and 3/4". Dark gray and cactus green also in 7/16".

INSTALLATION. *Vitrolite* is installed in interiors with Vitro-cement and 1/64" joints buttered or pointed. For exterior installation, *Vitrolite* is attached with asphaltic mastic and supported at the lower edge and at horizontal joints by metal angles. All joints on exteriors should be 1/16", buttered and pointed with joint cement. For full details, contact a Libbey·Owens·Ford Distributor listed in the classified section of the telephone directory, or your nearest L·O·F District Office (see below).

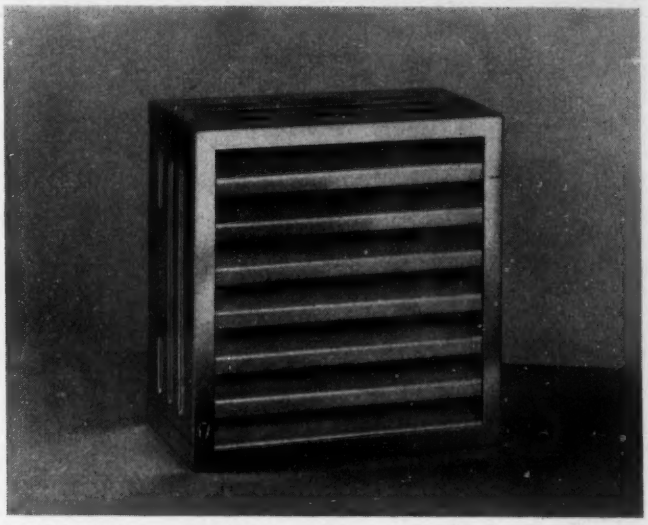
USES. *Vitrolite* is especially suitable for wall facing in bathrooms, kitchens, breakfast rooms and powder rooms. Also for window sills and splash panels for sinks. Ideal for storefronts and for many uses in public buildings and industrial plants.

LIST OF DISTRICT OFFICES

Atlanta, Ga.	Lamar 5239	Denver, Colo.	Tabor 8015	New York, N. Y.	Eld. 5-1025
Boston, Mass.	Hubbard 2-0100	Detroit, Mich.	Trinity 5-0080	Philadelphia, Pa.	Penny. 5-8666
Buffalo, N. Y.	Cleve. 0291	Indianapolis, Ind.	Franklin 1363	Richmond, Va.	3-3034
Chicago, Ill.	Central 6-2490	Kansas City, Mo.	Victor 5360	St. Louis, Mo.	Central 9863
Cincinnati, O.	Main 6174	Los Angeles, Cal.	Michigan 0854	San Francisco, Cal.	Sutter 1-4360
Cleveland, O.	Main 1-7180	Memphis, Tenn.	37-7589	Seattle, Wash.	Seneca 2513
Dallas, Tex.	Riverside 4026	Milwaukee, Wisc.	Broadway 2-5704	Toledo, O.	Main 5291
Dayton, O.	Michigan 8315	Minneapolis, Minn.	Main 8429	Washington, D. C.	Sterling 4472

LIBBEY·OWENS·FORD GLASS COMPANY • 1642 Nicholas Bldg., Toledo 3, Ohio

GLASS blocks are available in designs suitable for every building requirement. The new blocks illustrated feature a factory-applied finish that makes cleaning easy, simple.



VENTILATION is provided by this newly-designed unit that has adjustable glass louvers on the inside and outside. Other models are manufactured with stainless steel louvers.

ance ±1/32" for thicknesses 11/32" to 5/8"; ±1/16" for thicknesses 3/4" to 1".

Bullet Resisting Glass: thicknesses—3/4", three ply; 7/8" and 1", four ply; 1 3/16", 1 9/16", 2 3/32", five ply; 2½", 7 ply; 3", 9 ply. Maximum sizes, 43" x 63" or 33" x 73". Weights range from 9.75 to 39 lbs. per sq. ft. on basis of 156 lbs. per cubic ft. Thickness tolerance ±1/16" for thicknesses 3/4" to 2 3/32"; ±3/32" for thicknesses 2½" by 3".

Tuf-flex plate glass in thicknesses of 1/4" to 1¼" can be combined into Safety Glass to maximum sizes of 18" x 24". Requirements for Safety Glass or Bullet Resisting Glass other than listed should be submitted for consideration.

Uses

Windows and windshields in automobiles, buses, trucks, railway coaches, airplane, etc. View panels and barriers for animal cages in zoos and aquariums. Windows, doors, screens, glass furniture or any use where breakage or collapse of glass might cause damage or injury.

Bullet-resisting glass, composed of multiple laminated layers of glass and plastic is used for enclosures in banks, cashiers' cages, jewelry stores and as protective guards or screens.

Safety glass cannot be set with the types of putty or mastic ordinarily used in glazing because they are likely to cause deterioration of the plastic.

Cutting and Installation

For detailed instructions on cutting and installing safety glass ask your glass distributor.

GLASS BLOCK

The introduction of structural glass block as a building material is one of the important developments in the building industry. Glass blocks are hollow with a sealed-in dead-air space. They are made by shaping two halves in molds which are then fused together in one block. Glass block laid up in panels take the place of the ordinary window frame and sash. However, panels built of them should never be used to carry loads other than their own weight. While masons lay glass blocks, the method by which they are laid differs greatly from that used for laying brick.

In the sash replacement market there are several factors which help the dealer sell glass block. Repeated expense for painting, caulking and replacement of sash destroyed by condensation and corrosion is eliminated, and cleaning is much simpler. These factors are important particularly in factory work.

Lighting can be controlled to some extent by the proper use of prismatic or light directional glass block, in some instances lighting the interior at some distance from the window. The insulation value of glass block is considerable, helping both heating and cooling loads and inside condensation problems.

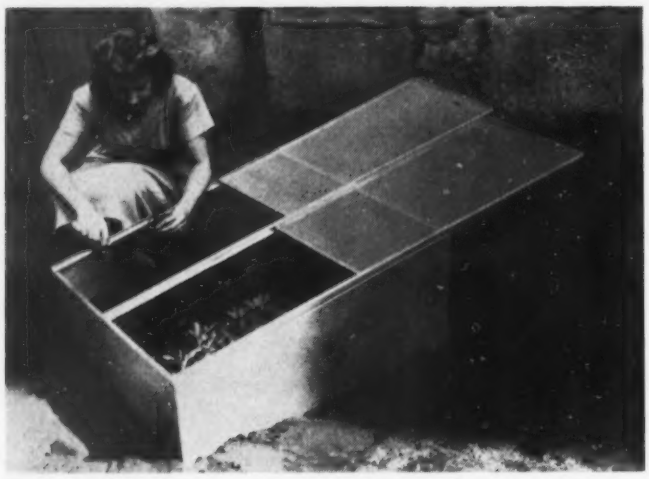
Glass block panels are easily erected by regular masons. Metal ties are needed only when the area exceeds 50 square feet.

For interior partitions the set-in-wood glass block partition has a rapidly growing market. Easy and clean to erect, and completely demountable these partitions may be used for temporary or permanent locations. Offices may be rearranged, rest rooms for women can be partitioned off in plants where women are employed.

Partitions to divide living room and dining room or hall, without loss of light, to separate the dinette from the kitchen or to provide a playroom in the basement, can be erected easily without the inconvenience and dirt of plaster or mortar.

GLASS BLOCK REQUIRED FOR VARIOUS OPENINGS

No. of Units	5¾" x 5¾"		7¾" x 7¾"		11¾" x 11¾"	
	Height or Width		Height or Width		Height or Width	
	1/4" joints	3/16" joints	1/4" joints	3/16" joints	1/4" joints	3/16" joints
1	6"	5 15/16"	8"	7 15/16"	1'-0"	11 15/16"
2	1'-0"	11¾"	1'-4"	1'-3 7/8"	2'-0"	1'-11 7/8"
3	1'-6"	1'-5 15/16"	2'-0"	1'-11 15/16"	3'-0"	2'-11 15/16"
4	2'-0"	1'-11¾"	2'-8"	2'-7¾"	4'-0"	3'-11¾"
5	2'-6"	2'-5 15/16"	3'-4"	3'-3 15/16"	5'-0"	4'-11 15/16"
6	3'-0"	2'-11 7/8"	4'-0"	3'-11 7/8"	6'-0"	5'-11 7/8"
7	3'-6"	3'-5 7/8"	4'-8"	4'-7 7/8"	7'-0"	6'-11 7/8"
8	4'-0"	3'-11½"	5'-4"	5'-3½"	8'-0"	7'-11½"
9	4'-6"	4'-5 7/8"	6'-0"	5'-11 7/8"	9'-0"	8'-11 7/8"
10	5'-0"	4'-11 7/8"	6'-8"	6'-7 7/8"	10'-0"	9'-11 7/8"
11	5'-6"	5'-5 7/8"	7'-4"	7'-3 7/8"	11'-0"	10'-11 7/8"
12	6'-0"	5'-11¼"	8'-0"	7'-11¼"	12'-0"	11'-11¼"
13	6'-6"	6'-5 7/8"	8'-8"	8'-7 7/8"	13'-0"	12'-11 7/8"
14	7'-0"	6'-11 7/8"	9'-4"	9'-3 7/8"	14'-0"	13'-11 7/8"
15	7'-6"	7'-5 7/8"	10'-0"	9'-11 7/8"	15'-0"	14'-11 7/8"
16	8'-0"	7'-11"	10'-8"	10'-7"	16'-0"	15'-11"
17	8'-6"	8'-4 15/16"	11'-4"	11'-2 15/16"	17'-0"	16'-10 15/16"
18	9'-0"	8'-10 7/8"	12'-0"	11'-10 7/8"	18'-0"	17'-10 7/8"
19	9'-6"	9'-4 15/16"	12'-8"	12'-6 15/16"	19'-0"	18'-10 15/16"
20	10'-0"	9'-10¾"	13'-4"	13'-2¾"	20'-0"	19'-10¾"
21	10'-6"	10'-4 15/16"	14'-0"	13'-10 15/16"	21'-0"	20'-10 15/16"
22	11'-0"	10'-10 7/8"	14'-8"	14'-6 7/8"	22'-0"	21'-10 7/8"
23	11'-6"	11'-4 15/16"	15'-4"	15'-2 7/8"	23'-0"	22'-10 15/16"
24	12'-0"	11'-10½"	16'-0"	15'-10½"	24'-0"	23'-10½"
25	12'-6"	12'-4 15/16"	16'-8"	16'-6 15/16"	25'-0"	24'-10 15/16"
26	13'-0"	12'-10 7/8"	17'-4"	17'-2 7/8"	26'-0"	25'-10 7/8"
27	13'-6"	13'-4 15/16"	18'-0"	17'-10 15/16"	27'-0"	26'-10 15/16"
28	14'-0"	13'-10¼"	18'-8"	18'-6¼"	28'-0"	27'-10¼"
29	14'-6"	14'-4 15/16"	19'-4"	19'-2 15/16"	29'-0"	28'-10 15/16"
30	15'-0"	14'-10 7/8"	20'-0"	19'-10 7/8"	30'-0"	29'-10 7/8"
31	15'-6"	15'-4 15/16"	20'-8"	20'-6 15/16"	31'-0"	30'-10 15/16"
32	16'-0"	15'-10"	21'-4"	21'-2"	32'-0"	31'-10"
33	16'-6"	16'-3 15/16"	22'-0"	21'-9 15/16"	33'-0"	32'-9 15/16"
34	17'-0"	16'-9 7/8"	22'-8"	22'-5 7/8"	34'-0"	33'-9 7/8"



GLASS SUBSTITUTES are widely used for glazing hot houses because they permit ready passage of the sun's ultra-violet rays. The material is also low in cost and will stand rough handling.

MODERN GLAZING and caulking compounds are designed to maintain pliability and elasticity over a long period, providing a secure, air tight seal for the window pane.

MORTAR FOR GLASS BLOCKS

The ingredients used in mortar for laying glass blocks are measured by volume. For this purpose, 25 lbs. of quick lime or 40 lbs. of hydrated lime equals one cubic foot of portland cement. The recommended mix is one part portland cement, one part lime, and 4 parts sand.

A prepared masonry mortar mixed to manufacturer's directions may also be used.

All lime should be either quick lime or hydrated lime. Quick lime should be fresh, well burned, free from ashes, core, clinker, and air slacked particles.

PLASTIC GLAZING MATERIALS

Glass substitutes, or window materials may be employed for many everyday uses, breezeway enclosures, farm window openings, hot beds, basement windows, etc. These materials, fabricated on a wire, plastic or cord base, come in many styles and sizes designed for a particular purpose. Waxed clother materials are also available.

The plastic used for glass substitutes lets through ultra-violet rays of the sun and for this reason they are especially popular on the farm. The overall cost is cheaper than glass and they hold heat remarkably well.

CAULKING AND GLAZING COMPOUNDS

There is a tremendous market for glazing and caulking compounds in the building products field, and most dealers carry a complete stock of putty, caulking compounds and guns to supply the demand in their trading area. The use of these materials is not confined to new construction. In fact, their uses in old homes and buildings, both in the city and on the farm, present by far the largest potential.

Caulking compounds have a wide variety of applications. They are used in the application of flashings, roofing, dampproofing, etc. as well as for sealing all cracks, crevices, and joint lines where water and air sealed joint is desired.

Caulking compounds may be applied with a knife or spatula; however there are several types of application tools available that simplify the job tremendously. These are hand-actuated guns that hold a cylinder of compound, or a cartridge containing a quantity of it, and deliver it in a thin ribbon to the proper spot.

HOW TO GLAZE A WINDOW

Spread a thin coat of putty, about one-sixteenth inch thick, on the rebate or groove in the sash where the glass rests, to form a bed. Lay the pane in, concave side down, to avoid breaking the glass. (The concave side is easily determined by sighting along the edge of the pane.) Care should be taken to get this putty bed evenly distributed, so that unfilled gaps will not appear between the sash and the glass. By pressing gently on the glass to inclose the edges of the pane in the putty, the pane can be made water-tight, and the cushion of putty thus formed will reduce a liability of cracking the glass when the glazier's points are driven in. The glazier's points, which are small flat triangular metal pieces, are used in addition to putty to hold the glass in place. They should be laid on the glass, about three or four to a side, and driven into the sash along the long sides first with the side edge of a chisel or screw driver sliding the tool over the surface of the glass. If the glass is still loose after the points have been driven in, remove all ill-fitting points and replace them, pressing the glass more firmly against the bed of putty during the process.

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6467 Georgia Ave. Detroit 11, Mich.

Section 8 Electrical Supplies and Fixtures . . .

SINCE THE electrical system of a house or any other structure is an integral part of its construction, the building material dealer is finding it increasingly necessary to consider electrical items an important factor in his operations.

Basic items such as cable, conduits, junction and switch boxes insulators, etc., that comprise the built-in segment of the electrical system, are not complete without fixtures, switches, outlets and other finish items. Also, certain appliances are a necessary part of a complete package. For this reason, many dealers who have started with functional electrical supplies as a service to their contractor customers, have increased their electrical departments to include all items used in the modern home.

In addition to the new construction market, these dealers have found that a profitable volume of business is available from consumers if a consistent consumer-merchandising program is conducted.

This trend is accelerating for dealers find that a profitable electrical supplies and fixtures department can be developed by (1) offering "one-stop" service to the customer and (2) including electrical appliances in the lump sum price of the house so that their cost is paid as a part of the home buyer's monthly mortgage payment.

FIVE DIVISIONS OF ELECTRICAL MERCHANDISE

1. Electrical system installation items: those materials that are used to transmit current from the fuse box to the outlet. There is also a large consumer demand for these items, and a counter display including such additional things as wire for extensions, switches, outlets, etc., makes a profitable department of the dealer's business.

2. Fixtures—wall, ceiling, portable. A small display of these items not only helps the contractor customer select what he wants for his jobs, but also appeals to consumers who buy such fixtures and install them themselves. Both conventional and fluorescent should be included.

3. Household units—small appliances such as toasters, mixers, grills, etc., are largely consumer merchandise. They can be used to excellent advantage as "leaders" for tie-in advertising and sales programs.

4. Large appliances—washers, dish washers, refrigerators, ranges, deep-freeze units, etc. (See Kitchen, Laundry, Bath Section.)

5. Power tools—saws, drills, sanders, etc., for small home workshops or for the tradesmen in your trading area. (See Power and Hand Tools Section.)

INSTALLATION ITEMS

Electrical system installation items are those fixtures and supplies necessary to transmit electric current from the meter to all of the outlets and plugs in a house or other structure. Such leads are known as circuits, and there are four main types.

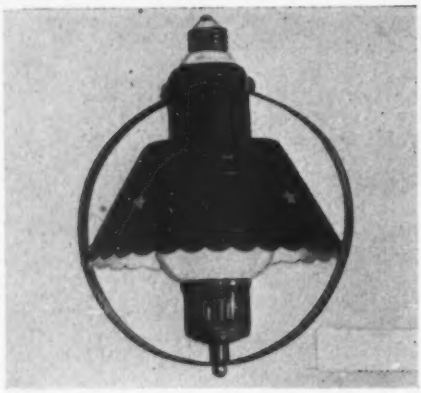
Appliance circuits are those that supply power for tools. Limit rating of the circuit is usually 20 amps, or heavy electric appliances such as, refrigerators, dishwashers, etc., laundry, and power-driven home workshop 2,200 watts.

General purpose circuits supply current for the usual outlets in the house, fixtures, wall plugs, and similar outlets. At least one such lead should be provided for each 500 square feet of floor space in the house.

These circuits are usually rated at a load limit of 15 amps, with a capacity of 1650 watts or less. Properly planned electric circuits in a home will distribute the load as evenly as possible among them.

Special circuits must be supplied for ranges, water heaters, etc. where extra heavy loads are required. Such circuits vary from 20 to 30 amps.

Buzzers, bells, and telephones require very low voltage for their operation. Their power is obtained from the regular power lines and reduced by means of transformers. Some operate independently, deriving their power from dry cells.



LIGHTING fixtures that screw in like a light bulb are among the newer developments in the electrical industry. Attractive styles are available for hallways, bedrooms and kitchens.

HANGING fixtures are also simple for homeowners to install. Manufacturers supply complete instructions. Soderless connectors are screwed on the wire ends to forms a tight, insulated junction.

VALANCE lighting is simplified by this new factory-engineered unit. Fluorescent lighting, the valance and the traverse rods are combined in a single, readily-installed fixture.

Conduit and Cable: Power from the meter is first led through a main fuse box. Wires for this connection are always encased in rigid conduit. From the box, the circuit leads are carried in conduit, armored cable (BX), or non-metallic sheathed cable, according to local code requirements. Usually the latter method is not permitted for main circuit wiring.

Conduit is merely metal tubing, into which wire of the proper size and capacity is threaded. BX cable consists of spirally wound metal casing around the wire. Manufactured as a unit, it is supplied in several sizes according to the load it is required to carry.

Junction and Gang Boxes: These fixtures are used for junctions between two sets of wires when no outlet is provided. Codes require that the covering plates of all junction boxes be accessible without having to break through plaster. Also they may not be imbedded in any structural part of the house.

Junction boxes are made square and octagonal, and in several sizes. Each size is limited by code to the number of wires that may be spliced within it.

Gang boxes are merely outlet boxes with removable sides, so that two or more may be lined up side by side to form a multiple outlet box. These are usually covered by a single plate.

Outlet Boxes: These are similar to junction boxes, except that they house or contain receptacles or fixture studs. They are made round, octagonal, and rectangular, and are used in ceiling or wall, according to the type of outlet.

Outlet boxes are usually made of metal, but they are also supplied in plastic and porcelain.

Plates: These covers for outlet boxes are made in a number of sizes and shapes according to their use. They form a decorative, protective covering for switches, plug receptacles, sockets, etc., and are made in metal and plastic.

PRACTICAL TECHNICAL DATA FOR SALESMEN

Each room in a home requires study to determine the most appropriate locations for switches, lighting outlets and convenience outlets. Although this spacing arrangement is not a part of the salesman's duties, he should become familiar with generally accepted practices so that he can intelligently discuss points with his customers. For example:

1. Switches, on lock side of door, are located approximately 48" from floor line.
2. Convenience outlets are located near the ends of wall spaces and approximately 18" from the floor.
3. Special purpose outlets for kitchens, etc., are located approximately 43" from the floor.
4. Unbroken wall spaces—one outlet should be placed so that no point along the floor line is more than six feet from an outlet.
5. Walls broken by doors—each wall space of three feet or more should have an outlet.
6. Halls—one outlet each 15 lin. ft. (switch controlled).
7. Stairs—one outlet on each floor (multiple switch controlled).
8. Recreation room—one ceiling outlet per 150 sq. ft. of area.
9. Basement—one ceiling outlet per 150 sq. ft. of area.
10. Porches—one ceiling outlet per 150 sq. ft. of area.
11. Terraces and patios—one wall outlet per 15 ft. of house wall.
12. Kitchens—one outlet per 4 lin. ft. of work surface or counter area.

LIGHTING FIXTURES

Lighting fixtures open a new opportunity for additional volume and profit. Because they can be placed so attractively, they are ideal for display purposes, either on walls, ceilings, merchandising panels, in display windows or for illuminating other items the dealer has for sale.

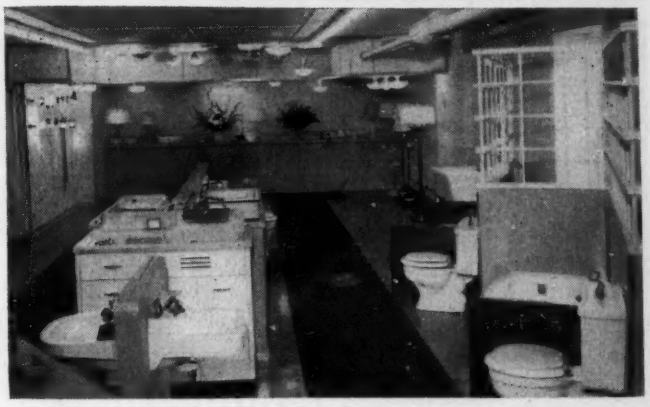
Except for display stock, no stock inventory is required for fixtures. They can be ordered in the design and finish which the customer selects for there is usually ample time during the construction period to obtain fixtures for any new job before it has advanced to the stage where fixtures can be hung.

Fluorescent lighting fixtures should have a definite part in the display. Well engineered developments have made these units extremely attractive and practical for any part of the home.

A well planned fixture display lay-out will not occupy much space, will enhance the appearance of the sales room, will represent a modest outlay and will enable the customer to buy with confidence. Such a display can well become a source of extra business by reason of the fact that the electrical contractor (many of whom do not have any display room) will bring his clients to the dealer's display to make selections. In doing this, the fixture customer also exposes himself to the other sales appeals which the dealer may offer.

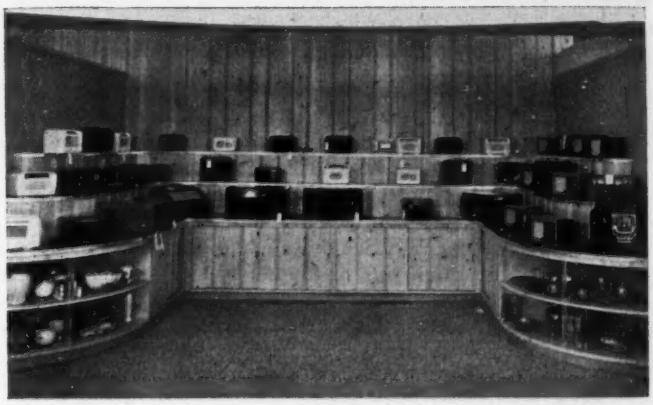
If display facilities permit, another lucrative field for the dealer consists of portable lamps, sun lamps, desk lamps, etc. These items should not be overlooked.

DISPLAYS of small appliances may be placed adjacent to bay exhibits of kitchens, laundries, bathrooms, etc. Being closely allied to these rooms insofar as uses are concerned, such positioning has a strong suggestive selling factor.



DISPLAYS of lighting fixtures may be either in special bays, or may occupy an open section of the display room, as in the photo above Note the decorative touch that the display adds to the entire store.

LARGE appliances may be displayed in open floor areas, or may be arranged in bays with cabinets and other room fixtures to show how they actually look in the home.



THIS ATTRACTIVE BAY display of small appliances not only exhibits the individual items to excellent advantage, but presents an invitation for customers to examine them at close range.

SMALL APPLIANCES

Location, display facilities and the local market potential largely determines whether the dealer will handle toasters, coffee makers, grills, mixers, radios, electrical clocks, etc. Dealers who have a hardware department frequently find that a small stock of these electrical items can be counted upon to develop a steady turnover.

These are very popular gift items and the heaviest volume may be expected during the holiday season. Advertising and sales effort should be concentrated on them at that time.

It must be remembered that these items are largely purchased by women. Therefore, sales, advertising, and display methods must be designed to attract feminine buyers.

MAJOR APPLIANCES

Ample floor space and accessible location are two definite requisites for successful selling of these items. However, they can and are being successfully merchandised by numerous aggressive retail dealers who had acquired appropriate display facilities and are prepared to follow through with servicing, etc.

Such appliances include washing machines, dish washers, refrigerators, deep freeze units, vacuum cleaners, water heaters, electric stoves, etc. Only floor samples are required because delivery is not an immediate requirement. As previously noted, there is a trend to include appliances in the entire house mortgage structure, enabling minimum payments over a long period and giving both the dealer and the customer the benefits of long range budget payments.

The fact cannot be overemphasized that the average consumer considers a kitchen, either in a new home or a remodeled one in an older structure, as a complete package. He cannot visualize it from an assortment of cabinets, appliances, fixtures, etc. The most successful merchandising programs, therefore, are based on the package sale idea where the dealer plans, installs, and arranges the financing for the complete job. In many areas where dealers are not supplying this service, specialists who do nothing else are making an excellent business of just such service.

The package idea also is best demonstrated in the dealer's store with a "bay" display that simulates a complete installation, thereby enabling the customer to visualize exactly how the equipment will look in his own home.

See Kitchen, Laundry, Bathroom Section.

Power Tools

For further details, see Power and Hand Tools Section.

MISCELLANEOUS ELECTRICAL SUPPLIES

In addition to the items already mentioned, there are numerous other supplies in the electrical line. Wire for extension cords, lamps, etc.; plugs, sockets, bulbs, fuses, switches, surface raceways, insulators, and many others make up a line that is constantly in demand around every home.

While the unit sale resulting from single items may be small, the line is a good traffic stimulator, and closely allied items lead to much larger sales when suggestive methods are used.

A recent development has been the manufacture and packaging of electrical supplies for easy installation by the homeowner himself. The electrical fitting shown, for example, requires no tools for safe, simple wiring. How-to-do-it instructions are right on the package.

IT'S MORE PROFITABLE TO FEATURE

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...the brand that's nationally advertised...
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CELOTEX INSULATING SHEATHING—Protected by the patented Ferox® Process from dry rot and termite attack. Has approximately 30% greater bracing strength than ordinary sheathing. Three times the insulation value of yellow pine. Double-waterproofed—*inside* by integral treatment that coats every fibre; *outside* by asphalt coating on both surfaces, all edges. Yet has over twice the vapor permeability required by government agencies. Variety of types, sizes.

CELOTEX INSULATING LATH—Provides a strong, solid, continuous plaster base PLUS insulation. Grips and holds plaster securely. Adds structural strength. Specially designed edges give reinforcement at all joints. Two types: Regular, and Vapor Seal with a vapor barrier of asphalt on the back. ½" thick, 18" x 48".

CELOTEX INSULATING INTERIOR FINISHES—Build, insulate and decorate—all at one time. Rich, interesting textures. Smart, exclusive colors, blends and whites. Full range of sizes in Tile Board, Finish Plank, Building Board, Beveled Interior Board, Key Joint Units and Mouldings. Tile Board and Finish Plank have famous Celotex "E" Joint for concealed stapling or nailing.

CELOTEX ASPHALT ROOFING PRODUCTS—A complete line of Thick Butt, Hexagonal and Sta-Lok Shingles for new construction and re-roofing. "Triple-Sealed" for longer life. Exclusive "Color Harmonized" blends of unequalled beauty. The Celotex line also includes smooth and mineral surfaced roll roofing in varying weights.

CELOTEX INSULATING SIDINGS—Beautify, strengthen, insulate old homes and commercial buildings. Mineral granule finish never needs painting. Variety of sizes and handsome colors in CELOBRIC®, colorful brick design; CELOSTONE®, rugged stone pattern; SHADOWLAP*, popular shake shingle style; and SHADOWGRAIN*, attractive lap siding type.

*TRADEMARKS

Celotex Rock Wool Products—Complete line that's fast-selling. *Celotex Rock Wool Blankets*, paper encased and with vapor barrier face. Full-thick, semi-thick in 2', 4', 8' lengths. Utility blankets in 8' lengths only. Reflective blankets in 2' and 8' lengths, standard thickness. *Celotex Hand-Pouring Rock Wool*, specially processed into pellets just right for easy pouring direct from bag. In 40 lb. bags. *Celotex Loose Rock Wool* for hand packing around pipes, ducts, etc.

Celotex Roof Insulation—A genuine cane fibre product designed especially for application under built-up roofing—over wood, steel or concrete roof decks. Four types—Vapor-seal, Preseal, Preseal "30" and Regular.

Celo-Rok® Gypsum Products—*Celo-Rok Wall Boards* for strong, low-cost walls, partitions and ceilings. Square or recessed edges. *Celo-Rok Plasters:* A complete line of gypsum plasters of uniformly high quality. *Celo-Rok Anchor Lath*, plain and perforated. *Celo-Rok ½" Weatherproof Sheathing* made water repellent by a special weatherproofing compound on both surfaces, all edges.

Celotex Hard Boards—Hard, dense, grainless, moisture-resistant boards made from clean, refined wood fibres. Rigid, strong, scuff-resistant. Available in these popular types: Regular, Panel Board, Tempered, Black Tempered, Tile (scored 4-inch squares) and Leather-Grain.

Celotex Flexcell®—Flexcell Bituminous Impregnated Cane Fibre Board is a premoulded material designed for use as concrete expansion joint filler, sill sealer in frame construction, plate sealer on masonry walls, perimeter insulation for concrete floors at grade. Non-extruding, resilient, durable. In a variety of thicknesses and widths.

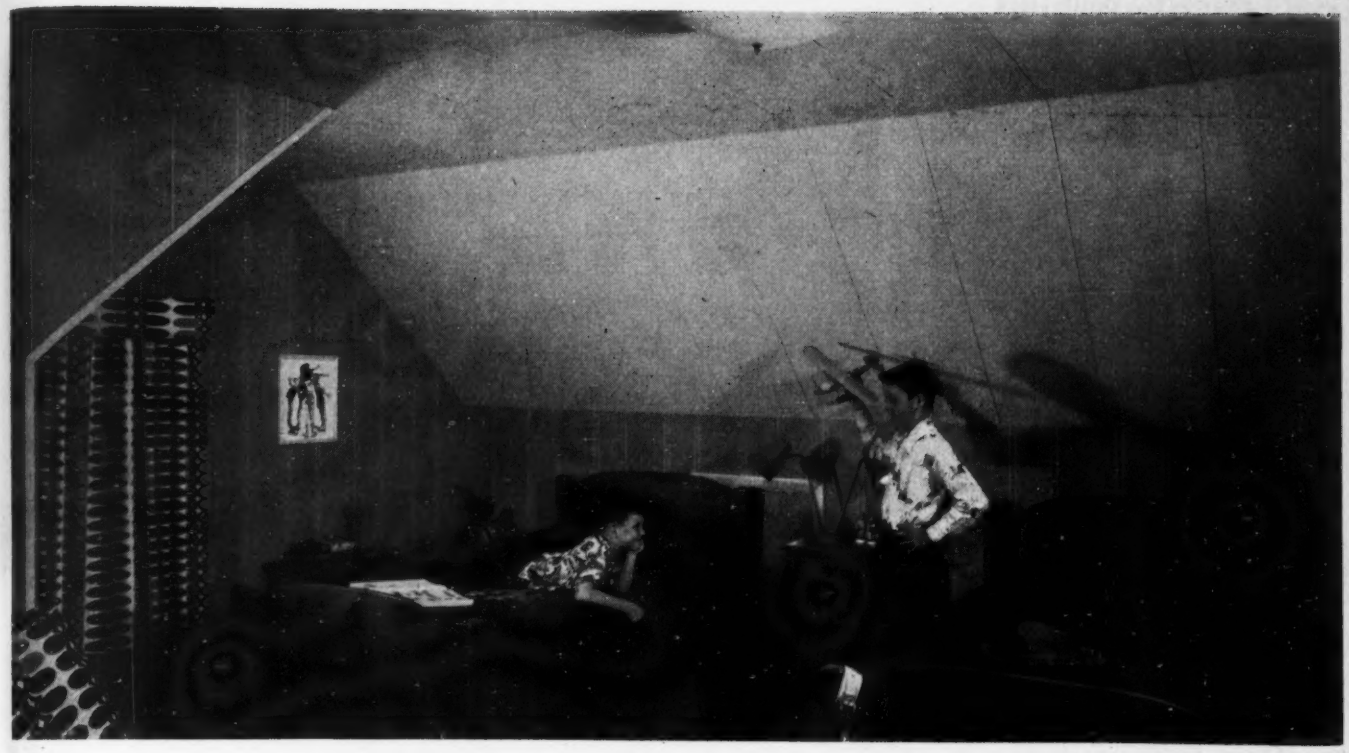
Sales come easier when you feature genuine

CELOTEX

REG. U. S. PAT. OFF.

BUILDING PRODUCTS

The Celotex Corporation, 120 S. LaSalle St., Chicago 3, Ill.



Section 9 Board Products, Wall Tiles

THE BUILDING BOARDS most generally stocked by lumber and building products dealers include insulating board, asbestos cement board, gypsum board, hardboard and laminated wood fibre board. All of these products have a common characteristic—they can be used to cover large areas quickly and easily with maximum ease of handling. Each one has individual qualities, however, which recommend it for certain uses.

The tremendous strides made in developing and improving building boards in recent years are reflected in the fact that these items now share an important percentage in the building products merchant's total sales.

While production figures for building boards include both regular-size sheets and companion products fabricated from the same type of materials, the dealer has been accustomed to thinking of "building boards" only in terms of the large, square-edge, general-purpose sheets that their name indicates. Gradually the dealer is broadening this classification to include tile board and special panels (manufactured with bases of hardboard, insulating board, fibre board, asbestos-cement board, metals, plastic, etc. on which are imposed highly polished and easily cleaned surface materials) as well as sheathing, lath, decorative plan roof insulation and other items fabricated from basic building board materials.

Insulating Board

Although insulating board is, of course, a form of insulation, it is primarily used as a board product (with its insulating properties adding plus values to its use as a board). For that reason, it is included and discussed fully in this Board Products Section.

Insulating board, sometimes known as rigid insulation or structural insulation, is manufactured from vegetable fibers. Those commonly used include wood, bagasse (sugar cane stalks), and corn stalks. It is low in density, soft to the touch, light in weight but high in tensile strength.

The first step in making insulating board is to reduce the raw material to a pulp. The fibers then are cooked and washed. The cooking dissolves the soluble matter and the washing removes it. The clean fibers next are chemically treated with waterproofing materials. The loose fibers then are formed over large rolls or in molds into large, coherent sheets. The final steps are removing any remaining water from the sheets by means of driers and cutting and trimming the boards to the finished sizes.

Within and between the fibers of the completed board are millions of entrapped air voids. They serve to effectively retard the passage of heat. This quality gives the board its name. Insulating board of production line dryness has a thermal conductivity of 0.33. The natural interlacing and interweaving of the fibers and their subsequent shrinkage during the drying process knits them firmly together and forms a grainless board of high tensile strength and stiffness.

INSULATING BUILDING BOARD

Insulating building board is a general purpose product, made with square or beveled edges. It is produced with the natural finish on both sides and also with a natural finish on one side and a colored surface (usually white or a light pastel) on the other. The top surface is sometimes textured; insulating board combines efficient insulating properties with sufficient strength to permit its use as a structural material.

Size: Insulating building board is made four feet wide and in lengths of 6, 7, 8, 9, 10 and 12 feet (not all manufacturers make all lengths). The common thickness is one-half inch, but it also is made in ¾-inch and one-inch thicknesses.

Colors: The natural board may be gray, tan or brown, depending upon the raw materials used. White or ivory is the factory-finish most commonly applied. Green, buff, and other colors are sometimes available.

Packaging: Six pieces usually make up a bundle. The approximate weight per 1,000 square feet is 760 pounds.

Uses of Insulating Building Board

Insulating building board is widely used where a rigid, light-weight, easy-to-handle utility board is desired. Applied to walls and ceilings it provides a beautiful interior finish. It is equally as effective used over existing finishes or in new construction. The standard colors form harmonious backgrounds for almost any decorative plan. If desired, the board may be stained, painted, stenciled or carved.

Insulating building board used as an interior finish may be applied by nailing to framing or furring or by cementing to continuous, smooth surfaces. The one-half-inch thick board should be installed on not more than 16-inch centers. For farm service building interiors, framing for the ¾-inch or one-inch board may be set on a maximum of 24-inch centers. Headers should be inserted between framing members at the unsupported ends of insulating boards to serve as nailing bases.

THERE'S a lot of good living in this basement. It's planned to be an entertainment center for family and friends. Yet, there's no interference from the family laundry.

FOR relaxation with a best-selling novel, this pretty living room is hard to beat. Walls and ceiling of interior finish in soft colors reflect more light than ordinary wall surfaces.

AN economical way to turn your basement into an inviting recreation room is to install walls and ceiling of interior finish.

For masonry construction, furring strips should be attached to the masonry on centers as described above and the insulating board nailed to the furring strips. Masonry above grade should be waterproofed in the inside before applying furring strips. Masonry walls below grade should be waterproofed on the outside before back filling. The 4-foot wide boards should be installed so as to leave a space of ⅛-inch between adjoining boards and at ends.

Nails and Nailing

Where nails are to be covered (under battens, etc.), use 1½-inch galvanized shingle nails, galvanized roofing nails or box nails for half-inch thick insulating board. For one-inch thick board use 2-inch galvanized roofing nails or box nails. Where nails are exposed, use 1¼- or 1½-inch finishing nails (as specified by manufacturer) for half-inch board and 1¾- or 2-inch galvanized finishing nails for 1-inch thick board. Finishing nails should be driven at an angle, with the heads set flush with the surface of the board. For farm work, and other locations where a fine finished appearance is not essential, large headed nails should be used even where the nailing is exposed. The use of galvanized or cadmium coated nails will guard against staining due to rust.

Joint Treatments

Where joints are left exposed in finished rooms, the edges of the board should be beveled or covered with wood battens or other mouldings.

Conditioning

It is recommended that all interior finish insulating boards be placed in the room where they are to be used 24 hours before application. This will permit adjustment of the board to room conditions.

Precautions

Where insulating board is applied to wall surfaces, or used on the outside of studs without any additional exterior finish, it should be protected against damage by abrasion, puncture or poultry pecking. That can be done by covering it to the necessary height with lumber, hardboard, plywood, asbestos cement board or other suitable materials, nailed through to the underlying studs. Materials ordinarily used for exterior siding will protect insulating board applied to the outside of studs.

Storing and Handling

Insulating board should always be stored under cover. Reasonable care should be taken to prevent damaging the board at the corners. A common method of storing is to lay the bundles flat and form piles.

How to estimate: To the area to be covered add 5% for waste. However, allowance for waste varies considerably with the purpose for which it is used, the type of finish required and the various room sizes. Each job should be carefully estimated to get maximum use of the board, taking into account varying room sizes, openings and size of board available.

Selling points:
- Economy.
- Ease of application.
- Little muss or dirt.
- Provides insulaton as it builds.

Fuel Saving with Insulating Board

Substantial fuel savings can be obtained by using various thicknesses of insulating board in the walls, ceiling or roof. Thus by varying the thickness and amount of this material used, it is possible economically to conform to the requirements of each individual job or locality.

Reduction in Heating Plant Size

The required size of the heating plant can be reduced in the ratio that the heat losses are reduced. The exact amount will vary with every structure but the percentages shown in Table 2 are indicative of what may be expected in the case of an average two-story dwelling.

Added Comfort

Insulating board retards the passage of heat in either direction. It not only keeps the heat in longer during the winter, but it tends also to keep it out in the summer, thus inducing lower indoor temperatures. Thus insulating board provides greater comfort in both summer and winter.

Another vitally important influence of the insulating board on comfort is the effect on wall and ceiling surface temperatures. In the summer, these surfaces are much cooler in a dwelling insulated with insulating board than in one not insulated and this fact greatly increases body comfort because bodily comfort depends not only on the air temperature and humidity, but also on the temperature of surrounding surfaces.

INSULATING BOARD PLANK

Insulating board planks are narrow widths of insulating board and are obtainable in a number of lengths. These planks are made with tongue-and-groove or other joint treatments which conceal the nailheads. Planks are most commonly used for walls, but they can be utilized effectively alone or in combination with other insulating board interior finishes to build ceilings.

Sizes: 8, 10, 12 and 16 inches wide; 6, 8, 10 and 12 feet long. Usual thickness: one-half inch. Thicknesses of ¾-inch and 1-inch are sometimes made by some manufacturers.

Colors: White, ivory, various pastel colors and blends.

Packaging: Usually 12 pieces to a bundle.

Storage and Handling: Similar to other insulating board products.

Application

Insulating board planks may be applied either vertically or horizontally with equal success. Applied vertically, in random widths, they simulate Early American painted paneling, at the same time helping to create the illusion of additional height in a room. Applied horizontally, they form a wall which makes a suitable background for a modern interior and also helps to make a small room look wider and longer. They can be applied by nailing to a sound wood lining or to furring strips placed on suitable centers, or they may be cemented to smooth, even walls in good condition. Application by cementing should be con-

another **HOMASOTE FIRST** — *designed to reduce the cost of building*

For the speedy, economical construction of *FIELD OFFICES* and *TOOL SHEDS*...

. . . use a material that's strong and crackproof—that's completely weatherproof, light in weight and easily worked . . . a material that's made in Big Sheets—up to 8′ x 14′—in sizes two men can handle easily and at considerable savings in labor and materials.

Use Homasote—the oldest and strongest insulating-building board on the market. Here is a board that has proved itself in industrial, residential and farm buildings—and in every climate from Alaska to Little America. Homasote's resistance to weather makes it the perfect *protective* material for field offices and tool sheds.

Homasote saws and nails like wood and need not be painted. The Big Sheets mean that you build better, faster and at less cost. Field offices and tool sheds may be easily transported from job to job.

For comfortable working conditions for men in the field—for full protection of records and tools—specify Homasote . . . Let us send you literature and specification folder showing its many uses.

Nova Sales Co.—a wholly owned Homasote subsidiary—distributes the Nova Roller Door, Nova-I. P. C Waterproofing Products, Nova Sidewalls and the Nova Loc-Nail. *Write for literature.*

HOMASOTE COMPANY
TRENTON 3, N. J.

SEE OUR CATALOG IN SWEET'S

—makers of the oldest and strongest insulating-building board on the market

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Send literature on Homasote Insulating-Building Board.

ADDRESS.....

NAME.....

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My lumber dealer is.....

Product	sizes	Thicknesses	Edges*	Major Uses
Building Board**	4x7' 4x10' 4x8', 4x12' 4x9'	½", ¾", 1"	Square.	General purpose structural insulating board; interior finish; base for plastic paints, wall coverings and other interior decorative finishes. Also used as wall sheathing under brick veneer, siding, shingles and stucco; as roof sheathing on pitched roofs under various types of roofing.
Sheathing	4x8', 4x10' 4x9', 4x12'	½", 25/32"	Square.	Wall sheathing under brick veneer, siding, shingles or stucco; also as roof sheathing on pitched roofs under various types of roofing.
			Long edges fabricated, short edges square.	
	2x8'	25/32"	Long edges V-Joint, short edges square.	
Thin Board	4x7', 4x10' 4x8', 4x12' 4x9'	⅜"	Square.	Show windows, displays, partition or interior finish where low cost, light weight board is desired.
Lath	18"x48"	¾" ½", 1"	Long edges V or shiplap	Insulating plaster base for walls, partitions and ceilings.
Roof Insulation	23"x47"	½", 1" 2"	Square edges on ½" thickness. Square edges and/or offset on 1", 1½" and 2" thicknesses.	For roof insulation under built-up roofing on flat roofs and under certain types of roofing on pitched roofs. Floor insulation for masonry floors. Protection course for membrane waterproofing.
Tileboard	12"x12" 12"x24" 16"x16" 16"x32"	½", ¾", 1"	Fabricated edges.	Decorative, insulating wall and ceiling panels. Frequently used in conjunction with building board and/or plank.
Plank	Widths: 8", 10", 12" and 16" Lengths: 8', 10' and 12'	½" ¾"	Fabricated long edges.	Decorative, insulating wall and ceiling finish. Frequently used in conjunction with building board and/or tileboard.

*"Fabricated edges" refers to any type of edge treatment other than square edges without reinforcement.
**Standard colors and finishes of Building Board are (1) natural board and (2) one light colored board (e.g., white, ivory, cream or buff).

Table 1.—Structural Sizes and Thicknesses of Structural Insulating Board Products

fined to experienced workmen. The planks should fit snugly together but never forced into place. Nailing strips should be on centers as specified by the manufacturer. It is recommended that planks be conditioned by opening the package and allowing them to stand for 24 hours before erection for adjustment to atmospheric conditions.

Uses

As a wall or ceiling interior finish, as suggested under uses for tileboards.

How to estimate: Find the total area to be covered. Allow 5% on small jobs and 2% on large jobs. Make no deductions for openings unless larger than ordinary. Nothing is lost through trimming the joint as plank and tile are manufactured to give net coverage. Figure the number of plank required to the nearest full package as broken packages of plank cannot be purchased or returned.

INSULATING TILE BOARD

As the name indicates, tileboards are comparatively small squares and rectangles. They are produced in a number of colors and surface textures. The variety of shapes and colors make them adaptable to many different designs. Tileboards are particularly suited for ceilings, although they are sometimes used to obtain unusual effects on sidewalls.

Sizes: Insulating tileboards are commonly made one-half inch thick and in panels 12x12, 12x24, 16x16, and 16x32 inches. Some manufacturers produce these sizes in ¾-inch and 1-inch thicknesses. Larger tiles also are produced by some companies.

Colors: White, ivory, pastel colors and blends.

Packaging: Varies with manufacturers. Approximate weight per 1000 square feet: 775 pounds.

Storage and Handling: Similar to insulating building board.

Application

The general instructions for installing insulating building board apply to tileboard. In new construction, properly spaced wood framing or furring is necessary. In remodeling, the units may be applied by means of adhesives or nailing, or by a combination of the two, directly over old plaster or other wall coverings.

The design to be followed should be carefully worked out before the first unit is put in place. Where large units are used the use of adhesives for intermediate fastening avoids the necessity of face nailing. It is usually preferable to begin application at the center of the area and continue outward, so that the pattern will work out symmetrically.

Because of the different joint treatments used by various makers, the manufacturer's instructions should be studied before work is begun or before the dealer advises a customer in the application of tileboard.

Uses

Insulating tileboard is both a decorative and insulating interior finish for walls and ceilings. The wide field of use for these tileboards includes basement game rooms, attic bedrooms, libraries, dining rooms and living rooms in private houses and the interiors of churches, schools, restaurants, stores, theaters, offices, recreation halls and other commercial structures.

Selling points:

Insulates as it decorates.
Excellent for covering cracked plaster walls and ceilings.
Easily applied—little muss and dirt.
Quickly applied.
Permits a limitless variety of decorative patterns.
Gives new character to rooms.

INSULATING BOARD SHEATHING

Insulating board sheathing is made of wood, cane or other vegetable fiber in the manner of other insulating board products. Various supplementary waterproofing treatments, such as asphalt coating or integral treatment

NOW!

J-M PANELS AND PLANK HAVE

Flame-Resistant Finish

NO EXTRA COST!

That's right, not a penny extra for the addition of this *flame-resistant* surface. The new ingredients in the coating make it smoother, harder, more durable and easier to clean. It can be repainted several times without appreciably losing its flame-resistant qualities. More beautiful than ever, it will give your customers lasting protection and satisfaction.

OPENS UP NEW MARKETS!

The new flame-resistant finish meets Federal Specifications. This makes it easier for you to sell Johns-Manville Panels and Plank . . . makes it possible for you to sell these improved materials in the areas where the use of flame-resistant surfaces are required by existing building codes.

JOHNS-MANVILLE JM PRODUCTS

For full information see your J-M representative or write Johns-Manville, New York 16, N. Y.

Johns-Manville

Table 2.—

CEILING OR ROOF INSULATION (BELOW)

		WALL INSULATION				
		A	B	C	D	E
		No Wall insulation	25/32" Insulating Board in place of ordinary sheathing	½" Insulating Board in place of ordinary lath	25/32" Insulating Board Sheathing ½" Insulating Board Lath	25/32" Insulating Board Sheathing plus 1" Insulating Board Lath
1	No ceiling insulation	0	11.3%	11.3%	18.8%	22.5%
2	½" Insulating board lath or Interior finish (Ceiling)	6.2%	17.5%	17.5%	25.0%	28.7%
3	1" Insulating board lath or Interior finish (Ceiling)	10.3%	21.6%	21.6%	29.1%	32.8%
4	1" Insulating board lath or Interior finish (Ceiling) plus ½" insulating board on roof rafters	13.1%	24.4%	24.4%	31.9%	35.6%
5	1" Insulating board lath or Interior finish (Ceiling) plus ½" insulating board on top of ceiling joists.	13.8%	25.1%	25.1%	32.6%	36.3%

Percentages of Fuel Saved Due to Various Types and Thicknesses of Insulating Board Used In Typical 2-Story Residence.

HOW TO APPLY INSULATING BOARD

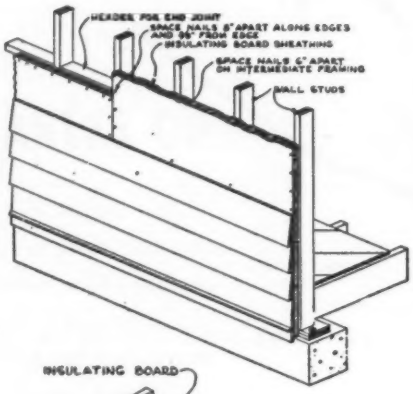
HEADER FOR END JOINT
SPACE NAILS 3" APART ALONG EDGES AND 3/8" FROM EDGE
INSULATING BOARD SHEATHING
SPACE NAILS 6" APART ON INTERMEDIATE FRAMING
WALL STUDS

Fig. 1. Exterior view of frame wall showing application of insulating board sheathing covered with wood siding exterior finish.

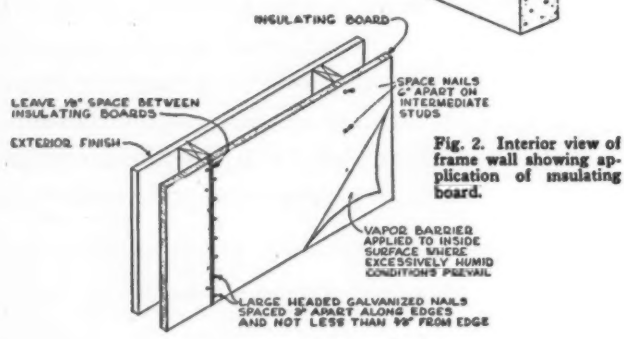
INSULATING BOARD
SPACE NAILS 6" APART ON INTERMEDIATE STUDS
LEAVE 1/8" SPACE BETWEEN INSULATING BOARDS
EXTERIOR FINISH
VAPOR BARRIER APPLIED TO INSIDE SURFACE WHERE EXCESSIVELY HUMID CONDITIONS PREVAIL
LARGE HEADED GALVANIZED NAILS SPACED 3" APART ALONG EDGES AND NOT LESS THAN 3/8" FROM EDGE

Fig. 2. Interior view of frame wall showing application of insulating board.

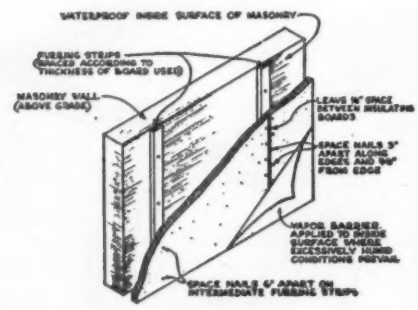
WATERPROOF INSIDE SURFACE OF MASONRY
FURRING STRIPS SPACED ACCORDING TO THICKNESS OF BOARD USED
MASONRY WALL (ABOVE GRADE)
LEAVE 1/8" SPACE BETWEEN INSULATING BOARDS
SPACE NAILS 3" APART ALONG EDGES AND 3/8" FROM EDGE
VAPOR BARRIER APPLIED TO INSIDE SURFACE WHERE EXCESSIVELY HUMID CONDITIONS PREVAIL
SPACE NAILS 6" APART ON INTERMEDIATE FURRING STRIPS

Fig. 3. Interior view of masonry wall showing application of furring strips and insulating board.

with asphalt, are used with some of the sheathings for additional weather protection.

This product performs four services. It builds, it braces, it insulates and it stops wind. Produced in large, easy to handle units, it can be applied quickly and with minimum waste.

Size

Most insulating board sheathing is made in two widths —four feet and two feet. The four-foot wide boards are produced in two thicknesses, 25/32-inch and one-half inch, and in lengths ranging from eight to 12 feet. The two-foot widths are made only in a thickness of 25/32-inch and a length of eight feet.

Uses

As a wall sheathing, insulating board sheathing can be used under the wood siding shingles, stucco or brick veneer.

It can also be used on pitched roofs. If the roofing is to be wood shingles or slate wood, strips are installed to receive the roofing. Other types of roofing, such as asphalt shingles, roll or metal roofing or tile require the installation of solid wood sheathing over the insulation.

Insulating board sheathing is also recommended as an exterior surfacing for temporary structures. After it is applied to the framing, battens and wood trim are applied over the boards. The asphalt treated surfaces can be painted for additional weather protection with paints recommended by the sheathing manufacturers.

Because of its strength, the board may be bent to moderate curvature without breaking or steamed and bent to sharp curvature.

Application

The procedure for applying insulating board sheathing is in general the same as that for wood sheathing, there being a few minor respects in which the methods differ. Studs should be erected as in ordinary frame construction on 12 or 16-inch centers and two by four headers inserted between framing members at the ends of all insulating boards to serve as a nailing base. Use 2-inch galvanized nails with ⅜-inch or ½-inch heads, or 8d common nails for 25/32-inch insulating board. For ½-inch board use 1½-inch galvanized roofing nails with ⅜-inch heads. Apply the large insulating board units lengthwise (vertically) and directly to all framing members, with ample bearing for nailing along all edges. Nail to intermediate framing members first, spacing nails 6 inches apart; and then along the edges, spacing nails 3 inches apart and ⅜-inch in from the edge. Drive nails until the heads are flush with the surface of the insulating board.

Never force insulating boards in place. Leave a ⅛-inch space between adjoining boards and at ends of boards. Most insulating boards are cut scant in width and length to allow for this space. Where 2-foot by 8-foot sheathing is used, it should be applied horizontally in accordance with manufacturers' specifications. Bring sheathing into close contact with frame around windows. Certain boards should be moistened lightly in dry weather, the day before application, as directed by the manufacturer. Flash windows, doors and other cased openings with strips of metal or prepared roofing.

Wood siding may be applied directly over the insulating board, nailing through to the studs. Siding boards should butt over studs.

Where shingles are to be used, nail 1x2 furring strips horizontally over insulating board to studs, spacing to fit the shingles. Nail shingles to furring strips.

For brick or stone veneer, properly space anchors and nail through the insulating board into the studs. Lay the brick or stone in the usual manner. Allow not less than ½-inch space between the insulating board and the brick or stone.

Have a Cigar!

THERE'S A
NEW ADDITION
TO OUR FAMILY OF
QUALITY PRODUCTS

Simpson allwood* HARDBOARD

*T. M. Ore. Lbr. Co.

Simpson
QUALITY SINCE 1896

DOUGLAS FIR and WESTERN HEMLOCK LUMBER
REDWOOD LUMBER
DOUGLAS FIR PLYWOOD
DOUGLAS FIR and HEMLOCK DOORS
WOODFIBER INSULATING BOARD PRODUCTS
ACOUSTICAL PRODUCTS
SIMPSON ALLWOOD HARDBOARD

●

Simpson Allwood Hardboard is manufactured by the Oregon Lumber Company, Dee, Oregon.

●

SIMPSON LOGGING COMPANY
1065 Stuart Bldg., Seattle 1, Washington

NOW—to the already large family of Simpson quality forest products, we add HARDBOARD. This new product is available through better retail lumber dealers.

Simpson Allwood Hardboard is manufactured of Douglas fir fibers under rigid manufacturing controls to assure uniform quality. The line is *complete*—in thicknesses, sizes and types—and meets the demands and requirements of architects, builders, commercial users, farmers and home owners.

THESE ARE THE SIMPSON ALLWOOD HARDBOARDS

- **Standard Hardboard**
- **Black Treated Hardboard**
- **Treated Hardboard**
- **Hardlite (lighter density)**
- **Underlayment**
- **Wall Tile**

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SIMPSON LOGGING COMPANY AL
Sales Division, 1065 Stuart Bldg., Seattle 1, Washington

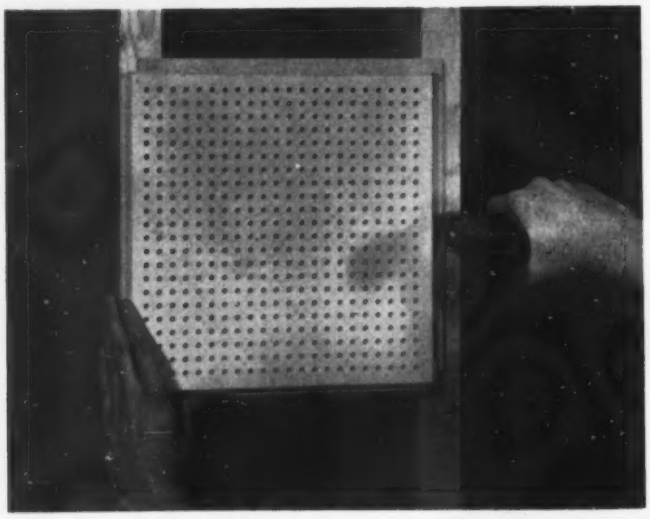
Please send me sample and further information about SIMPSON ALLWOOD HARDBOARD.

Firm name _____

Address _____

City _____ *Zone* _____ *State* _____

Attention of _____



THIS new acoustical tileboard has a flanged tongue and groove joint for easy application with staples or nails, or a beveled butt-edge joint for adhesive application.

INSTALLING one of the new acoustical materials. The fissured surface closely resembles Travertine marble, provides high sound absorption and excellent light reflection qualities.

If stucco is to be used as exterior finish, it is generally considered good practice to apply a layer of asphalt saturated roofing felt over all surfaces to receive stucco. Self-furing and non-furring stucco bases should be applied in accordance with the manufacturers' specifications.

The resistance to distortion of wall sections sheathed with insulating board has been tested in a number of laboratories. As would be expected, the bracing strength increases with the width and thickness of the board. The 2x8-foot sheathing, horizontally applied, was found to have considerably more strength and rigidity than 1x8-inch wood shiplap, applied horizontally without bracing. The 4x8-foot insulating board in the half-inch thickness, applied vertically, had more than two and a half times the strength of wood shiplap, applied as previously described. Insulating sheathing 4x8-feet and 25/32-inch thick exceeded in strength and rigidity wood shiplap applied horizontally with let-in bracing.

How to estimate: Find the total area of the walls to be covered. Add 5% for waste. Make no deductions for openings.

Selling Points:

It builds, braces, stops winds and insulates in one operation.

Large, easy to handle sheets applied quicker with less waste than ordinary lumber.

Insulation value at no extra cost of labor and material.

Does not require use of building paper.

ACOUSTICAL MATERIALS

A huge market is developing on Main Street that should excite the interest of lumber dealers everywhere. Nor does it stop there. Actualiy it extends to every structure where quietness is preferable to din and clatter. That, of course, takes in a big territory and includes so many buildings of different types that potential sales loom as far as the eye can reach.

Acoustical tile is now beginning to come into its own. Consistent advertising on the part of manufacturers calls attention dramatically to the fact that a noise not only annoys but it reduces the efficiency of employees and causes customers to seek places of business where quiet prevails and noise has been banished as a costly nuisance.

Actually the market has existed since the first structure was erected. It's the building material that remedies a serious defect that is comparatively new although it, too, has been available for a decade or two. Perhaps it is more accurate to say that it is the rapidly increasing appreciation of its value that creates a new and profitable sales opportunity for alert lumber dealers.

While the majority of these products are used in offices, factories, hospitals, and similar places, where the need for sound dampening is more necessary; there is also a growing market for them in homes, particularly in basement play rooms, home workshops, etc.

In most instances sufficient sound deadening is achieved by covering the ceiling. The majority of acoustical materials on the market, therefore, are designed to provide a decorative finish and bright light reflection to the area in addition to its functional duty. They are usually supplied in squares; 12" x 12", 12" x 24" being common sizes. Thicknesses vary from ½" to 2½".

These materials are secured to the ceiling by nailing or cementing. Many are manufactured with special flanges and other interlocking devices to better integrate the installation.

Asbestos Cement Board

Asbestos cement board is a many purpose building board made of portland cement reinforced with asbestos fibers. It is light gray in color and has a number of individual characteristics which make it particularly suitable for a number of purposes. These include resistance to water, immunity to rust, decay and corrosion, fireproofness and flexibility.

The board is made by combining cement and the asbestos fibers under tremendous hydraulic pressure. The result is a tough board with a smooth, hard finish. Although stonelike in composition and appearance, it can be worked with ordinary hand or power tools.

Asbestos cement board does not require any paint or stain to preserve it, but it can be painted or stained when special color effects are required.

Paints suitable for use over concrete or cement material should be used. Instructions of the manufacturer should be followed.

Asbestos board surfaces can be washed with water—by scrubbing down or with a hose—or scarped down with a hoe, on farms, with no damaging or deteriorating effect.

Size

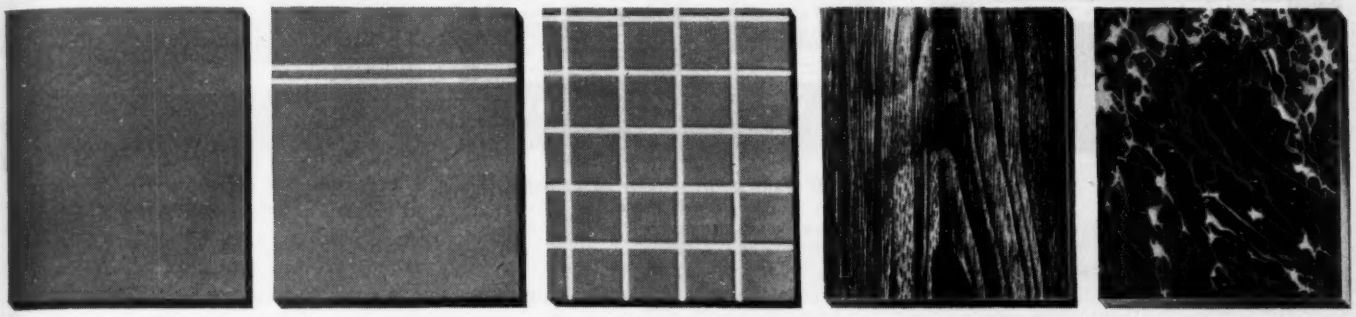
Standard sheets of asbestos cement board are 4 feet long by 8 feet wide. Thicknesses are ⅛-inch, 3/16-inch, ¼-inch and ⅜-inch.

Uses

Asbestos board has a wide range of uses. The most common are the wall and roof material for portable buildings, as an interior lining for buildings of all kinds, as exterior siding and for partitions. In addition, it is used as a utility board wherever a hard, durable, wear-resistant surface is desired.

Farm: There are an almost endless variety of uses for the board on farms. It is frequently used for the interior walls and ceilings of dairy barns and milk houses, where sanitation is essential. Health codes usually require that milk houses have interiors which can be kept

A new line of MARLITE PANELS for creating beautiful, low-cost interiors



. . .in Homes, Apartment Buildings, Institutions, Churches, Schools, Hotels, Theaters, Clubs, Bars, Stores, and other commercial installations.

Seven beautiful new Wood Panels plus a new Hi-Gloss finish on Marlite Plain-Colors, Horizontaline, and Tile Patterns make the Marlite line the most attractive and complete in the industry.

The exclusive high-heat-bake Marlite finish on every panel permanently fixes the "decorator-correct" colors and seals the surface against dirt, grease, moisture, ordinary acids and household stains.

Flexible, durable, waterproof Marlite, with a strong base of Masonite Duolux, is manufactured to the highest standards by the world's largest exclusive manufacturer of prefinished wallpanels.

COLORS AND FINISHES

PLAIN-COLORS
Jonquil Yellow
Cream
Mist Blue
Coral
Spring Green
White
Persian Red
Pearl Gray
Royal Blue
Black
Maroon

DELUXE FINISH—A special top-quality wallpanel with a hand-polished finish that adds an extra touch of beauty and sparkle to every installation.

HORIZONTALINE	*TILE-PATTERN*
Jonquil Yellow	Jonquil Yellow
Cream	Cream
Mist Blue	Mist Blue
Coral	Coral
Spring Green	Spring Green
White	White
	Black

HI-GLOSS FINISH—A high-quality, low-cost wallpanel with a high lustre, mirror-like finish. In the same low price range as Marlite Velvetex.

PLAIN-COLORS	*HORIZONTALINE*	*TILE-PATTERN*
Ivory	Ivory	Ivory
Pastel Green	Pastel Green	Pastel Green
Desert Tan	Desert Tan	Desert Tan
Pastel Blue	Pastel Blue	Pastel Blue
Pastel Yellow	Pastel Yellow	Pastel Yellow
Swan White	Swan White	Swan White
Dove Gray		

MARLITE SIZES AND PATTERNS

ALL PANELS 5/32″ THICK

WOOD PANELS: Blond Mahogany, Striped Mahogany, Silver Walnut, Natural Walnut, Light Oak, Gray Prima Vera, Natural Prima Vera in rich patterns that faithfully reproduce the natural grains of selected woods. 48″ x 72″ and 48″ x 96″ with grain running in the direction of the second dimension.

MARBLE PATTERN: Rose De Brignoles, Jaune Benou, Black and Gold, Skyros and Verdi Antique in stately, authentic reproductions of rare, imported marble. 32″ x 48″ and 96″ x 48″ with grain running in the direction of the second dimension.

HORIZONTALINE: Two pairs of score lines, centered 16″ apart, run with the length of the panel. Standard sizes—4′ x 4′, 4′ x 5′, 4′ x 6′, 4′ x 8′ and 4′ x 12′.

PLAIN-COLOR: A wide range of gay, cheerful colors for smart-looking interiors. Standard sizes—4′ x 4′, 4′ x 5′, 4′ x 6′, 4′ x 8′ and 4′ x 12′.

TILE-PATTERN: New striping method adds to beauty of single score lines, spaced 4″ apart, vertically and horizontally.

QUICK FACTS ABOUT MARLITE

USES. Walls, ceilings, doors and cupboards in residential bathrooms, kitchens, utility and recreation rooms, dens and powder rooms. And every type of commercial interior, including counters, displays, display window backgrounds, elevator interiors and landing areas.

FOR NEW CONSTRUCTION OR REMODELING. Large, easy-to-handle panels cover old walls or new. Present surface need only be dry, and reasonably smooth and straight.

EASY TO WORK. Marlite is easy to cut and fit with ordinary carpenters' tools. Panels cover wide areas swiftly. During remodeling, busy areas remain in service without interruption.

EASY TO CLEAN AND MAINTAIN. Marlite's lustrous finish is as durable as that on the finest refrigerator or display case, requires only an occasional wiping with a damp cloth to restore all the sparkling beauty. Never requires refinishing, painting or redecorating. Commercial users have cut maintenance costs as much as 75%. During commercial renovating, there is never any paint odors . . . never a need to move out perishables. Business goes on uninterrupted.

WIDE RANGE OF COLORS AND PATTERNS. Among Marlite's 67 color and pattern combinations, builders find a distinctive Marlite color and pattern to suit any decorative theme . . . permitting modern, beautiful interiors that are both pleasing and practical at moderate cost.

MOULDINGS FOR EVERY INTERIOR

Marsh Mouldings for any type wallboard interior bring enduring freshness to renovated rooms or brand-new installations. Aluminum Alloy and Presdwood shapes include matching mouldings for the striking new Marlite Wood Panels and Marble Patterns. In addition, Marsh Color-Matched Aluminum Mouldings match every Marlite panel color, featuring the genuine high-heat-bake Marlite finish.

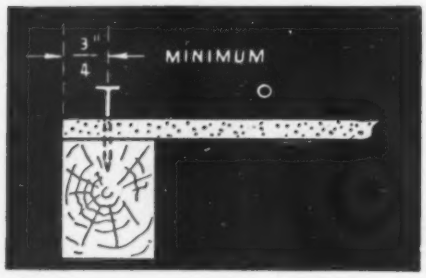
SPECIFICATION AND INSTALLATION DETAILS

See your local Marlite dealer, or write for free, illustrated folders giving complete information on Marlite, Marsh mouldings for every type installation, Marsh caulking, adhesive and polish. Insist on genuine Marlite, your guarantee of quality.

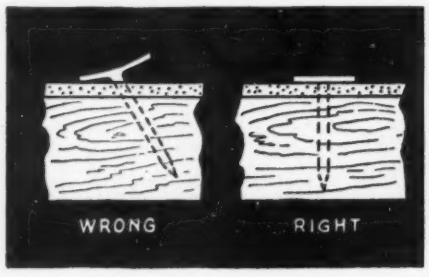
manufactured exclusively by

Marlite
PREFINISHED
WALL and CEILING PANELS

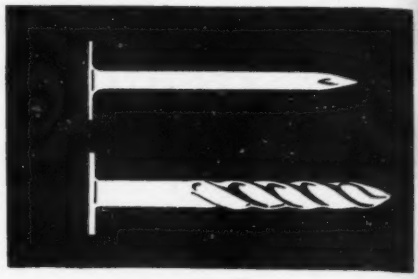
MARSH WALL PRODUCTS, INC., DEPT. 441, DOVER, OHIO
SUBSIDIARY OF MASONITE CORPORATION



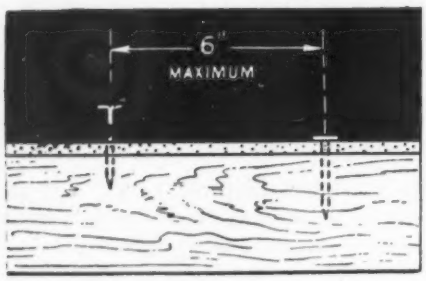
ABOVE, nails should be ¾ inch from edge of board. Below, space nails not more than 6 inches apart.



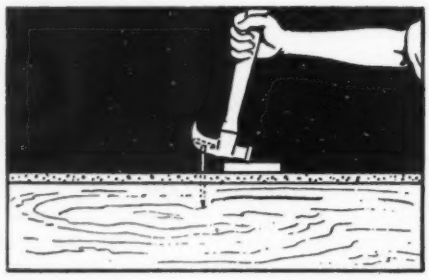
DRIVE nails perpendicular to asbestos cement board.



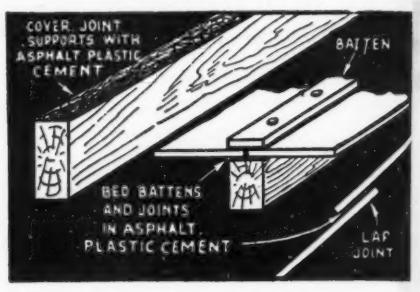
USE nails like these for asbestos board. The heads are big.



USE a wood block between board and hammer when pulling nails.



BED all joints and laps in asphalt plastic cement to make a job watertight.



DRAWINGS SHOW CORRECT APPLICATION PRACTICES FOR ASBESTOS CEMENT BOARD

spotlessly clean—and the washability of asbestos board and its resistance to moisture adapt it to the building of such interiors.

Asbestos board is suited for the building of all types of poultry buildings. It resists the gnawing of rodents, which are deadly enemies of young and helpless chicks. The board's hard, smooth surface also eliminates the pecking problem. When other materials are used on the inside of chicken houses, asbestos board is frequently placed over them for peck-proofing. For this use, it should be applied to a height of two feet around the lower walls and back of the roosts.

The large sizes in which asbestos cement board is produced adapt it to the construction of low, long buildings such as sheep sheds. Asbestos boards can be used for both sidewalls and roofs on these structures.

One of the most popular uses for asbestos cement board developed in recent years is the re-siding of barns and other farm service buildings. The characteristics of the board are such that this type of re-siding provides permanent protection. Thirty-two square feet of area (except for lap, if any) are covered with each standard size board, thus permitting a large building to be covered in a minimum amount of time, with little labor overhead.

Nailing Asbestos Board

It is important to use the right nails in applying asbestos board. The board is practically everlasting and can outlast the nails that fasten it. For exterior service, select a non-corroding metal or rustproof galvanized nail. Use a non-corroding nail for inside work where dampness, frequent wetting or condensation is likely to occur. On exterior applications open to the weather, exposed nail heads might leak water. Therefore, either use a galvanized lead-headed nail or cover the exposed nail head with a generous amount of gray asbestos putty or a high grade caulking compound.

Nails should be long enough to penetrate well into good sound wood. Barbed or ring shanked nails ordinarily hold better than others. Nails with medium sized heads are satisfactory when asbestos board is applied to a sidewall or vertical surface. Large headed nails should be used when the board is applied to a ceiling. For interior work where inconspicuous nails are necessary, use small countersunk head nails, in a rust-proof finish. For ordinary interior work, for nailing against wood sheathing or studding, use a hot galvanized asbestos shingle nail. In general, select nails having sharp needle points, no larger than 11 or 12 gauge, made of hard material or hardened. Choose nails you would use for hard wood like oak or birch.

Quarter-inch or thinner asbestos board can be nailed easily without preparation. The ⅜-inch sheets should be drilled, or have the holes started for the nails. A starting tool can be made by grinding down a nail-set so it is straight and not tapered. Start nails straight—not cocked at an angle. Drive nail heads snug against the board, but do not sink them into the surface of the board, unless you are using a countersunk head nail. Thick nails (11 or 12 gauge) should be kept ¾ or one inch away from the edge of the sheet and space not more than 6" apart. Hardened nails not over 14 gauge thick may be driven a little closer. Where nails must be driven to the edge-pre-drill holes for them.

Applying Asbestos Board

Three methods of application have been used for exterior work with complete satisfaction. The simplest is to butt the vertical joints and lap the horizontal ones, with the vertical joints covered with asbestos board battens. The second method is to butt the vertical joints, without battens but with waterproofing strips under the joints, and to butt the horizontal joints with metal flashings. The third way is to use one of the connector strips that are on the market.

Handling Asbestos Board

Asbestos board, like other materials, must be treated with reasonable care. It should be protected against impact shocks and dropping while being handled and applied. Care should be used in stacking and loading.

Keep asbestos cement board under cover or protect it with building paper or a tarpaulin.

Cutting Asbestos Board

Asbestos board is easy to cut and work. It can be sawed with a 5- or 6-tooth per inch carpenter's cross cut saw. A sharp saw will become dull rapidly at the first and then will do a good job for a long time. The best and quickest way to cut asbestos board is to score it and break it off. Just lay the sheet of asbestos board on a smooth bench or floor, use a straight board for a straight edge, laying it along the line to be cut. Then

Here's how I sold this 10,000-foot Insulite ceiling!"

ccessful dealer, Glenn Ross, tells how he building tileboard volume at his Golden alley, Minn. yard.

"Every sale is different and this one was no exception. How-er, the builder in this case had a couple of familiar problems.

"He was putting up a supermarket and had to keep the ed load of the ceiling to a minimum. That meant lightweight nstruction. And he wanted a job that would go up fast.

"To meet these requirements, the specs called for ceiling leboard. My job was to convince him that Insulite would give m the best results. Here's how I did it."

1 "We got together and went over the specs. The first step was to decide which of Insulite's complete line of ceiling tileboard best suited this particular job. It seemed to me that Lusterlite, Insulite's smooth, pre-painted tileboard, filled the bill perfectly."

It's a good bet that you'll find Insulite tileboard easier to sell too . . . because Insulite offers you this complete line in a variety of sizes:

ACOUSTILITE Perforated Tileboard: Insulite's popular sound-absorbing interior finish tileboard with tongue-and-groove or butt-edge joint.

FIBERLITE Acoustical Tileboard: Insulite's economical, double-duty acoustical tileboard that insulates as it hushes sounds.

LUSTERLITE Tileboard: Insulite's smooth, factory-painted ceiling tileboard with the extra-durable, easy-to-clean surface.

Get samples . . . see for yourself. Contact your Insulite jobber, Insulite sales representative or write Insulite, 500 Baker Arcade, Minneapolis 2, Minnesota.

4 "But the clincher on this sale was the flanged tongue-and-groove joint. It's strong and wide and easy to work with. It's one of the big reasons Insulite tileboard goes up fast and stays put . . . and why an Insulite customer usually remains an Insulite customer."

It'll pay you to sell

INSULITE

MADE OF HARDY NORTHERN WOOD

GYPSUM WALLBOARD—TYPES AND SIZES

NORMAL STOCK SIZES AND SPECIFICATIONS

Thickness	Edge	Width	Length	Approx. Weight Lbs. per M Sq. Ft.	Recommended Support Spacing	Joint Treatment	Size Nail Used	Nails Lbs. M Sq. Ft.	Maximum Nail Spacing	Decoration
½"	Recessed	4'	7, 8, 10 & 12'	2100	16" or 24" o.c.	Tape and Cement	5d Cement Coated	6	8" on Walls 7" on Ceilings	Paint or Wallpaper
⅜"	Recessed	4'	7, 8, 10 & 12'	1550	16" o.c.	Tape and Cement	4d Cement Coated	4½	Same as above	Paint or Wallpaper
⅜"	Beveled	4'	8, 10 & 12'	1550	16" o.c.	No treatment required	4d Cement Coated	4½	Same as above	Paint
¼"	Square	4'	7, 8, 9 & 10'	1100	16" o.c.	Tape or Battens or Panel Strips	4d Cement Coated, 6d over existing plaster	4d-4½ 6d-6	Same as above	Paint or Wallpaper

NOTE: Any of the above are available with insulating foil back in sizes given, at slight additional cost.

take any strong, sharp scoring tool—a heavy ice pick, old sharpened file or a sharpened nail—and scratch a deep score on both sides of the sheet along the line of the cut. Then clamp the sheet between two 2x4s or similar, laid along the score, and break off the sheet.

How to estimate—Follow same procedure as in estimating insulating building board.

DECORATIVE ASBESTOS BOARDS

Special asbestos cement boards, produced in colors, have been developed for use as an interior finish for bathrooms and kitchens. These are known as decorative asbestos boards. One kind consists of a base sheet of asbestos board on which an enamel finish is baked, thus providing a smooth, mirror-like finish. Another, and inexpensive, type is made of asbestos board which has been integrally colored in the manufacturing process.

Both types of decorative boards are available in either plain designs or scored in tile patterns. They can withstand heat, steam and severe moisture conditions without incurring damage.

The decorative boards come in large sheets and can be applied directly over old walls and ceilings.

Gypsum Board

Types

Gypsum board is a sheet material having a core of gypsum between two sheets of paper. There are three basic types.

Lath: The standard gypsum lath is a board ⅜" x 16" x 48"; in some areas it is made ½" thick and also in 32" lengths; on the west coast only a 5/16" thick board is sold. The paper covering of this board is particularly suitable as a gypsum plaster base. It is available in plain sheet form; perforated, each sheet having ¾" holes 4" on centers vertically and horizontally giving additional mechanical keys for plastering; and insulated, which is the plain lath with a sheet of aluminum foil attached to the back side serving as a vapor barrier and heat insulator.

Sheathing: Gypsum sheathing is a board ½" x 2' x 8' (some available in 6'—8" lengths) the paper covering of which is tough and treated to make it water-repellent. Some manufacturers also treat the core material making that water-repellent.

Sheathing is a board product for exterior sheathing under stucco, brick, wood siding, asbestos and wooden shingles. The need of building paper over the sheathing is eliminated by the use of gypsum sheathing, except where building codes specifically require it. Gypsum can be used for roof sheathing in some constructions.

Wallboard—Gypsum wallboard is a rigid sheet material available in ¼", ⅜" and ½" thicknesses, four feet wide and in varying lengths from 8' to 12'. It is manufactured with a highly calendered ivory colored papered face surface made for further decoration; with the face paper scored in a tile effect for use in bathrooms and kitchens; and with special paper having a wood grain surface for use without further decoration. Standard gypsum wallboard may be obtained with edges square, recessed, or beveled; gypsum tileboard comes with square edge only; while predecorated gypsum wallboards have either a square edge or beveled edge. Gypsum wallboard may also be obtained with a sheet of aluminum foil attached to the back side as a vapor barrier and heat insulator.

Uses

Lath is a plaster base for use with gypsum plaster; it should not be used with portland cement plaster nor lime plaster. Insulating lath should be used in exterior walls and top floor ceilings.

How to Apply, Finish Joints, Decorate

Application: Gypsum lath and sheathing shall be applied across the framing starting from a lower corner on walls and working over and up staggering end joints. Foil back lath shall be used on exterior walls and top floor ceilings only and shall be erected with the foil against the framing. Wood grained and tile wallboard shall be erected vertically on side walls and as required to carry out design in ceilings (preferably across framing). In any case where wood strips or other paneling effects are to be used the erection shall be vertical. In vertical erection where possible use full length boards from floor to ceiling. Wallboards erected to have joints finished and further decorated should be applied horizontally (long dimension across framing). In all cases in erecting gypsum wallboard avoid joints vertically or horizontally extending from corners of doors, windows, or other openings. Avoid having four corners of different boards at one intersection. Do not have joints in wallboard on both sides of a partition on the same stud.

Framing: Good framing is required for a good job. It should be of proper strength, true, properly erected, and spaced a maximum of 16" on center for ⅜" thickness. Where ½" gypsum wallboard is used framing may be 24" on center. Headers should be provided in both planes at interior and exterior angles, for all fixtures, and for all end joints.

Old Plaster: For covering uneven old plaster, nail 1" x 2" furring strips over the plaster to provide proper nailing for ends and intermediate support for boards using 8d nails before applying gypsum wallboard. For covering sound plaster no furring is necessary. In this latter case the use of ¼" gypsum wallboard makes possible the refinishing of walls without removing and replacing trim.

Finishing of Joints: There are two general methods of finishing joints. One is an application of a plastic material to fill in joints smooth and the other the application of a reinforcing strip at the joint (usually a perforated paper strip) on top of the joint material. This strip is embedded tightly against the board and excess surface material scraped off to leave a smooth joint in the plane of the face of the boards. Joints should be treated a second and a third time if necessary to gain a smooth surface across the joints. Nail heads in the field should be spotted with the joint material.

Where paneled effects are desired, beveled edge board may be used or molding or plain wooden strips may be used to cover joints. For the most pleasing effect these should be spaced regularly in all walls and ceilings.

sell Cermak plastic wall tile

CERMAK "UNDERGATED" TILES ARE STRONGER

Look for the raised "Undergate" patent plug, the sign of superior quality. This patented "Undergate" process of moulding is a Cermak exclusive. Since plastic enters bottom of die cavity, edges can have no troublesome gate burrs and edge blemishes cannot develop. The centrifugal casting principle employed improves granular structure making Cermak tiles stronger than any other plastic tile. Marbleization is more symmetrical. Flush installations are easy with Cermak's true, deep edges.

WIDE DESIGN AND TRIM SELECTION

There are 11 Cermak field and trim tiles. A complete set of outside corner tiles makes every installation more attractive . . . makes every installation easier. Many standard trim designs are possible using the various cap, stripe and quarter tiles. Custom-built designs are easily created by trimming the various tiles used. Suggested design and installation instructions, in chart form, are available upon request. With the complete Cermak tile line there is no limit to design and trim possibilities.

19 BEAUTIFUL COLORS

Field tiles in 19 rich colors having unusual warmth and depth are available in solid or marbleized tones. Trim tiles are made in eight rich harmonious shades. In Cermak tiles, solid color extends clear through the entire tile; there is no coating to chip, peel or craze.

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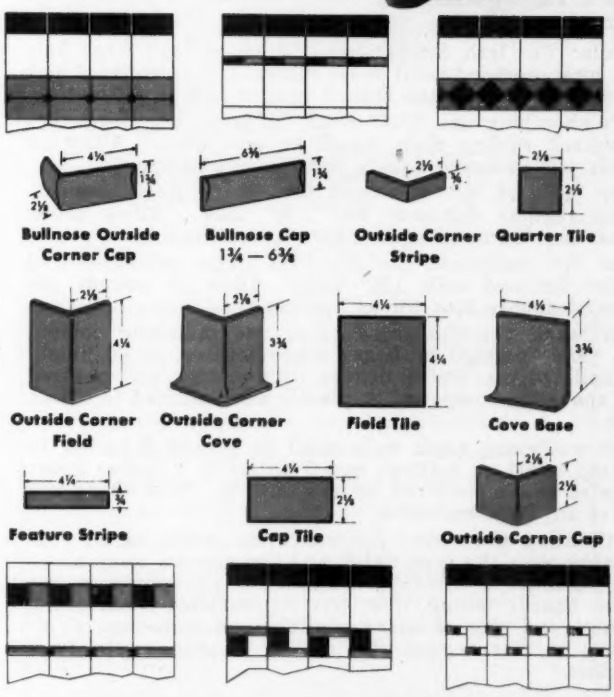

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Cermak
PLASTIC WALL TILE
UNDERGATED

Pioneers in the Plastic Tile Industry

CERMAK TILE COMPANY, INC.

4901 Brookpark Road • Cleveland 29, Ohio

IN CANADA: BUILDERS FLOORING & MILLWORK, LTD., 250 ST. HELENS AVENUE, TORONTO

WOOD pattern prefinished hardboard has been used to panel these walls in a Toledo doctor's waiting room. Matched aluminum alloy mouldings add the finished touch.

HARDBOARD, factory finished in color, surfaces the ceiling, and walls of this beautiful bathroom. The market potential for remodeling older bathrooms offers every dealer excellent profit opportunities.

Decoration: Gypsum wallboard may be used without further decoration after erection or can be painted, calcimined, enameled, or wallpapered. In the case of a standard wallboard job where it is desired to paint the finished walls all joints and nail heads should be sanded smooth before any further treatment. A primer sealer should be used to obtain the best results before painting, while a varnish size is recommended before papering or calcimining.

Nails: For lath use ⅜" head, 13 gage, 1⅛" large flat-head long diamond-point nails spaced 4" on center. Allow 10 pounds per thousand square foot of lath in estimating.

For sheathing use 7/16" head, 11 gage, 1¾" large hot galvanized roofing nails, space 8" on center. Allow 14 pounds per thousand square foot for estimating.

For ¼" and ⅜" wallboard use 4d, 14 gage, cement-coated regular flat-head nail 1⅜" long. Allow seven pounds per thousand square foot for estimating.

For ½" wallboard use 5d, 13½ gage, cement-coated regular flathead nails 1⅝" long. Allow 10 pounds per thousand square foot for estimating.

For wood grain board finishes use matching colored head nails specified by board manufacturer, or 5d finishing nails driven at 45 degree countersunk and covered with spackling compound or plastic wood stained to match finish.

For wallboard work nails shall be spaced 5 inches to 7 inches apart on ceilings and 6 inches to 8 inches apart on walls. Nails shall not be less than ⅜" from edges and ends of any gypsum board.

Estimating Coverage: Allowance for waste varies considerably with the type finish and the various room sizes. Each job must be carefully estimated to get maximum use of the board, taking into account varying room sizes, openings and size of board available. Manufacturers' directions in this regard will aid in keeping waste to a minimum.

Hardboard

Hardboards are panel materials made by exploding wood chips into a fibrous state, refining the fibers, and pressing them in heated flat-bed hydraulic presses into dense, rigid boards having exceptionally desirable characteristics.

Panel Sizes

All hardboards are four feet wide and are available in lengths up to twelve feet.

Types and Uses

Low Density Hardboards—These hardboards are smooth on one surface, have a screen impression on the other and are light brown in color. They are available in thicknesses of 3/16" and ¼" and are most commonly used for interior applications directly to studs in dry wall construction. This type board is also available in a .215" thickness for use as an underlay material for resilient flooring materials.

Medium Density (standard) Hardboards—These hardboards are available smooth on one side with a screen impression on the other, or smooth on both sides, and are light brown in color. The hardboard smooth on one side is available in thicknesses of ⅛", 3/16", ¼" and 5/16". It is used for many interior applications such as walls and ceilings, cabinets, partitions, and displays. The hardboard smooth on both sides is available in thicknesses of ⅛" and 3/16". It is also used for the above applications and is especially desirable for applications where both sides of the panels are exposed.

High Density (tempered) Hardboards—These hardboards are available in several types and thicknesses:

One side smooth, one side with screen impression in thicknesses of ⅛", 3/16", ¼" and 5/16". They are available in a dark brown or black color and are used for applications such as siding, doors, signs, floors, work surfaces and kitchen and bathroom walls. A special type of this hardboard is available in 3/16" and ¼" thicknesses for construction of concrete forms which produce smooth flawless concrete surfaces.

Smooth on both sides in thicknesses of ⅛" and 3/16". This hardboard is dark brown in color and is used for many of the above applications. It is especially desirable for applications where both sides of the applied panel are exposed.

Embossed leather pattern on one side, one side smooth in ⅛" thickness only. It is available in a natural dark brown color and is used for wainscot and wall surfaces in recreation rooms, lounges, offices or wherever a leather-like effect is appropriate.

Four-inch tile pattern on one side, one side smooth in ⅛" thickness only. It is dark brown in color. When finished with a contrasting stripe, it makes an attractive wall resembling ceramic tile. It is used primarily for wall applications in kitchens, bathrooms, laundries and similar locations.

Application

General—⅛" hardboards should be applied only over a solid backing. 3/16", ¼", 5/16" hardboards may be applied directly over framing members spaced no more than 16" o.c.

Exterior—Always use tempered hardboard at least 3/16" thick. For panel siding, fasten with galvanized siding nails spaced 3" o.c. around edge and 6" o.c. at intermediate supports. For lap siding, fasten with galvanized siding nails spaced 3" o.c. at vertical joints and along bottom edge at stud locations (16" o.c.)

Interior—For application to open framework, space nails 4" o.c. around edges, 6" o.c. at intermediate supports. When applied to solid backing, use a waterproof tileboard adhesive spread over entire back of panel. Panels should be held firmly against wall until adhesive sets.

Joints—Never butt boards together, bring to moderate contact. Joints may be formed by beveling or rounding edges or by covering with a Presdwood, wood or metal molding. In places where humidity is high, such as bathrooms and kitchens, a metal molding which provides for movement of the board, should be used.

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STAN stands for Weldwood Standard Hardboard.

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To meet all your requirements: both Standard and Reztemp Grades of Weldwood Hardboard come in three popular thicknesses: ⅛", 3/16", and ¼". In sizes: 4'x6', 4'x8', 4'x10', 4'x12' and 4'x16'. Panels up to 4'x12' are wrapped six to a package. Weldwood Reztemp Tile Board is available only in ⅛" thickness and sizes 4'x4', 4'x8', 4'x12'.

Call your Weldwood salesman for Weldwood Hardboard or Tile Board today.

United States Plywood Corporation is the World's largest Plywood organization, producing a complete line of decorative hardwood plywood, fir plywood, Novoply*, Weldtex® and other specialty items—as well as the most complete line of wood-faced flush doors on the market.

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WELDWOOD® Hardboard

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WATERPROOFED Panels of laminated wood fiber board were used for the ceiling, the wide expanse of wall at the right, radiator enclosure and window valance.

VISITORS may read or relax in this comfortable reception h recently remodeled with both walls and ceilings constructed of f wall wood fiber board.

Finishing

Generally, every type finish and method of application suitable for wood is satisfactory for hardboards. Normally a three coat finish consisting of a primer-sealer followed with two coats of paint or enamel made by the same manufacturer is recommended. In all cases, the manufacturer's recommendations for mixing and application should be followed. Score lines on tile patterned hardboard may be finished in a contrasting color with a striping brush or tool. Surface of leather embossed hardboard may be enhanced with a contrasting color in the depressions. To do this, apply colored glazing liquid and partially remove by wiping before it dries.

PREFINISHED HARDBOARDS

Prefinished hardboards, because of their utility, beauty, and ease of application, have found tremendous consumer acceptance during the past few years and have become an important item to the retail building products dealer.

These products, manufactured by a number of producers, consist of a tempered hardboard base upon which a high gloss, heat-baked surface is permanently integrated. This mirror-like surface, impervious to dirt, grease, moisture, mild acids, alkalies, and stains, makes an extremely attractive wall finish for kitchens, bathrooms, and for other applications where a surface of this kind is desired.

The material is available in a wide variety of colors, plain or scored to simulate tile, and recently in wood grain and marble patterns. Because of its simplicity in installing, prefinished hardboards are equally as adaptable for remodeling old rooms as they are for installation in new construction.

Installation of Prefinished Hardboards: These products are usually installed in connection with chromium or aluminum alloy channels and mouldings that make a "sure-seal" joint, and add to the beauty of the finished job. These are available in a wide selection of shapes, for every type of application.

The prefinished hardboards are easy to cut. Anyone familiar with the use of ordinary woodworking tools can do a highly satisfactory job of installation. That is why a large volume of these products is sold direct to home owners who do the installation work themselves.

There are a few considerations that must be taken into account, however, in order to insure a professional installation job. First, when prefinished hardboard is applied over an existing wall surface, the old wall must be made true and smooth by knocking-off high spots and filling-out low spots with furring.

Next, a level line is drawn around the room at the point where top of sheets will come. This insures a perfectly horizontal joint line. Finally, metal channels are installed, the hardboard is coated on the back with a suitable adhesive and slipped into place.

In kitchens or bathrooms, where the surfaces are exposed to moisture, there is no danger of water seeping behind the panels. The board itself is waterproof, and the mouldings and channels are sealed against water by a special filler.

Prefinished hardboards are generally supplied in 5/2 inch width, and in lengths of from 4 to 12 feet. Also avail able are colored hardboard mouldings of various sizes an patterns.

Laminated Board

How Produced

Laminated wood fibre panels are made according to spe cific manufacturer's formulae and processes. In addition to the different types of wood fibres used, certain chem icals are added in the better grades of board which no only make the product more water resistant, but stiffe and stronger.

Sizes

All thicknesses of wood fibre panels are available 4 fee in width and in lengths from 6 to 16 feet. One manu facturer makes a 6-ply laminated wood fibre panel up t 8 feet in width and average room length.

Laminated panels are also made indented with a til like surface. It is marked off into 4 inch squares to rep resent tile for use on the walls of bathrooms and kitchen

Uses

The average retail yard stocks the 3/16-inch or 4-pl panel as a general utility product. It is extensively use for making displays in theaters, sign shops, departmen stores. It is also used for many industrial purposes.

For re-covering existing walls and ceilings in old buildings needing repair and remodeling, ¼-inch or 5-pl laminated wood fibre panels should be used. The extr strength and rigidity are desirable and necessary, and i creases the insulating value of the material. The sma added cost is more than justified in the increased val of the product.

For new construction, use 6-ply, full-wall panels. Th have efficient insulating value. They eliminate the ti and expense of applying panel strips or crack filler. Th may be installed regardless of the weather—in winter in summer. The same carpenters who build the fram work of a house or apply the interior trim may also used to install full-wall panels.

For bathrooms and kitchens, tile-like laminated wo fibre panels may be highly recommended. Correctly a plied, they will be as permanent as the framework or t backing to which they are secured. The "double-thic tile has a smooth, lintless surface which is pre-sized a may be finished with almost any standard make of enam to give it a washable, long-wearing surface. Care shou be used to protect the edges around the tub to preve moisture from striking in. This material should not confused with pre-finished tile panels. It comes unfinish for lower cost and greater economy. It may be finished meet the color scheme desired by the owner.

How to estimate: Follow same procedure as for es mating Insulating Building Board.

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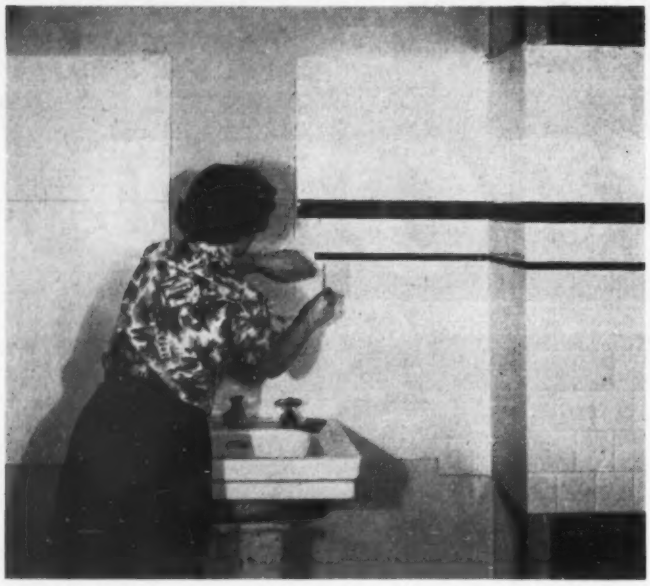


HOMEOWNERS are now applying plastic wall tile themselves because of product improvement and widespread advertising and publicity by manufacturers.

PLASTIC tile makes a colorful, durable, and sanitary wall covering in bathrooms, kitchens, lavatories, and all other rooms where such a surface is desired.

Application

In general, the following steps should be followed in applying laminated wood fibre panels over plaster:

1. Apply furring strips directly over the old plaster, on 16-inch centers. Shim all low points to provide a level backing for the panels.

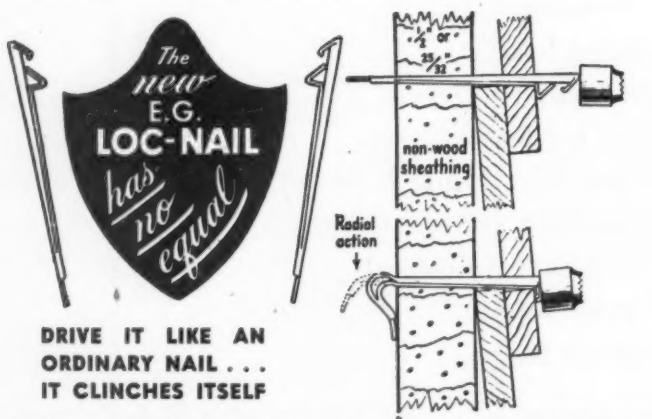
2. Provide backing for all four edges of each panel.

3. Although all other panel materials must be face nailed, one company manufactures special and unique fasteners for doing away with face nailing. These are applied to the furring strips about 8 inches apart. They hold the panels from the back, thus eliminating nail marks as well as the time and expense of countersinking nails and filling the nail holes.

4. Apply cornice around the outer edges of the ceiling. Then apply decorative strips over joints.

5. Duplex mouldings are suggested for the panel strips since they are made of the same material as ¼-inch panels and, therefore, take the same type of finish as the panels themselves. Never recommend lattice strips over the panel edges! They are not attractive. They detract from the decoration of the room.

6. Before applying, be sure to read the directions for more detailed application information.



DRIVE IT LIKE AN ORDINARY NAIL . . . IT CLINCHES ITSELF

SLIDING — LOC — CLIP

To apply acoustical tiles to wood furring

NO TEDIOUS NAILING . . . NO HAMMERING

½" & ¾" clips for ½" or ¾" or thicker square edge. Insulating board tiles—acoustical or decorative.

PRODUCTS OF

E. G. BUILDING FASTENERS CORP.

101 PARK AVE. NEW YORK 17, N. Y.

Wall Tile

Plastic Wall Tile—Although plastic wall tile is comparatively a newcomer to the building products field, plastic itself has proved its capacities for many years.

Wall tiles are made of polystyrene, a tough, durable plastic that possesses these inherent service qualities: (1) Very low in water absorption; consequently moisture or changes in weather or humidity do not affect its dimensional stability. (2) Light in weight, plastic tile require no special sub-structure for a base. Ordinary wall partitioning will easily sustain it. (3) Tensile strength ranges from 3,000 to 10,000 pounds per square inch. (4) Has high impact strength. Resists shattering or cracking under sharp blows. (5) Has a surface hardness adequate for all service requirements. (6) Has a slow burning rate approximately equivalent to plywood.

New All-Over Bevel. Plastic wall tile is now being manufactured with a all-over bevel which increases the beauty of the application and eliminates cupping. Molded tile pieces that provide a finished appearance are also available in quarter and half-tiles, bullnose caps, strips, etc. The molded tile pieces complete the all-tile installation eliminating the use of metal or rubber trim.

Application of Wall Tile—Plastic wall tile should be installed at normal room temperatures. After the wall is prepared, a level line should be marked for the top of the tile at the desired height.

The mastic is then put on with a wavy motion by using a notched mastic trowel. This insures maximum contact of the tile with the mastic. It should be applied to a thickness of approximately $\frac{3}{32}$" to ⅛".

The tile is then set either with flush edges, or with a mastic line that can be pointed-up.

Metal Tile—A recent addition to the field of wall finishing materials is metal tile. Made in standard sizes, these metal stampings are applied with mastic, and in some cases with specially designed clips, and interlocking flanges.

The tiles are supplied in a full range of colors that are practically impervious to fading, chipping, or discoloration. They may be applied by the homeowner himself.

Section 10 Floors and Floor Coverings

The major kinds of flooring and floor coverings fall into two classifications: (1) wood (principally hardwoods) and (2) other materials including asphalt tile, linoleum, rubber tile, etc.

Both hardwoods and softwoods are used for flooring. Softwood flooring is made chiefly in the harder softwood species, such as Douglas fir, southern yellow pine, western larch, etc. Normally at least one of the softwoods and two of the hardwoods are stocked in most yards.

HARDWOOD FLOORING

Hardwood Flooring is made principally from oak, maple, beech, birch and pecan. It is used not only in homes, but in industrial, commercial and institutional structures as well—wherever durability, ease of maintenance and pleasing appearance are requisites.

Oak

Twenty varieties of oak are processed into flooring. Except for grouping nine of them as white oak and 11 as red oak, no attempt is made to classify them in commercial practice. In quality and utility there is little difference between the two groups and the grading rules make no distinction. Red oak is more uniform in color and perhaps a little easier to finish. While they may be mixed indiscriminately in order from the mill, flooring of all white oak or all red oak may be obtained at a slightly higher cost for selection.

Among the advantages of oak flooring (some of which oak shares with other hardwood flooring species) are these: (1) Oak is one of the strongest of the heavy hardwoods. Oak flooring, thus, contributes materially to the structural strength of the building. (2) Quarter-sawed oak flooring is only exceeded by hard maple, beech and birch in wearing qualities, according to tests. (3) Oak neither hardens under cold temperatures nor softens when warm. (4) Oak is quite resilient—a factor that adds to foot ease and human comfort. (5) Variations of shade and grain, together with distinctive wood rays, form attractive design. (6) Oak flooring is easy to maintain. After years of service, it can be inexpensively reconditioned by sanding and refinishing.

Maple—This close-grained wood is particularly recommended for floors receiving unusual wear such as schools, ballrooms, skating rinks, bowling alleys, shops, etc. Tests show that maple is the most durable of all woods commonly used for flooring.

Beech—In physical properties beech is very similar to maple. However, it shows slightly more pattern in its grain and has more natural color. Suitable for residence work, as well as for hard service in commercial and public buildings.

Birch—In texture, hardness and abrasive resistance it closely resembles beech.

Pecan—Extremely durable. It belongs to the hickory family—the hardest of all hardwood.

TYPES AND SIZES OF HARDWOOD FLOORING

Strip Flooring—The type most extensively used. Practically all species of wood used for flooring are produced in this form. Made in the following sizes:

Finish Size	25/32 x 3¼	25/32 x 2¼	25/32 x 2¼	25/32 x 1½	½x2½	½x2	⅜x2	⅜x1½
Counted as	1x4	1x3½	1x3	1x2¼	1x3	1x2½	1x2½	1x2
Weight	2250	2125	2000	2000	1500	1300	1000	1000
Size of nails used	8d	8d	8d	8d	5d	5d	4d	4d
Nail Spacing	10 to 12 in. on center				8 to 10 in. on center		6 to 8 in. on center	
No. pcs. per bundle	8	12	12	12	16	18	24	24
Add to flr. area to obtain BM required	23½%	27½%	33 1/3%	50%	20%	25%	25%	33 1/3 %
To obtain BM from Bdl. feet multiply by	2 2/3	3½	3	2¼	4	3¾	5	4

Plank Flooring

One of the oldest types of hardwood floors, plank flooring dates back to the handicraft era. In its crude early forms it was widely used in medieval Europe, and later became a popular flooring for American colonial homes.

Plank floors usually are of random width pieces. Generally the pieces are tongued and grooved, but sometimes they are produced with plain ends. Frequently the edges of planks are beveled to reproduce the effect of the large cracks which characterized early hand-hewn plank floors. The wood pegs by which the old plank floors were fastened also are simulated. This is done by means of wood plugs glued in holes on top of the countersunk screws which actually fasten the planks.

Sizes

Solid planks generally are processed in 25/32-inch thickness, veneers in ⅜-inch. Special thicknesses of 1 1/16 inches for solid and 1⅛ inches for veneer can be manufactured at extra cost, but this is seldom recommended. Widths range from 4 to 9 inches in multiples of 1. Minimum length for certain types is 2 feet, for others 3 feet.

Pattern or Parquet Flooring

Pattern floors, also known as parquet and design floors, appeared as early as the 14th century in Europe. While today, as then, they represent the most elaborate and expensive type of hardwood flooring, they have been simplified to a great extent. Early pattern floors presented bizarre effects which would be incompatible with present architectural styles.

Parquetry is manufactured principally in 25/32-inch thickness. Most common face width for each piece is 2¼ inches, but width of 1½, 2 and 3 inches can be obtained by special order. Standard lengths are in multiples of face width. For example, in strips 2¼ inches wide, the lengths are 6¾ inches, 9 inches, 11¼ inches, 13½ inches, 15¾ inches and 18 inches.

Block Flooring

Block flooring, as stated above, is really a form of parquetry, since it constitutes a definite pattern. It differs from conventional parquetry in that the pieces are assembled into square or rectangular blocks at the factory. They are held together by metal splines or other types.

Sizes

The following table shows the available sizes of prefabricated blocks—squares and rectangles—of oak, hard maple, beech and walnut.

Strip width	½-inch thick	25/32-inch thick	33/32-inch thick
	Inches	Inches	Inches
1½ inches.	7½ by 7½	7½ by 7½	7½ by 7½
	9 by 9	9 by 9	9 by 9
	6 by 12	6 by 12	6 by 12
2 inches...	8 by 8	8 by 8	8 by 8
	10 by 10	10 by 10	10 by 10
	6 by 12	6 by 12	6 by 12
	Inches	Inches	Inches
2¼ inches.	.....	6¾ by 6¾	6¾ by 6¾
	.....	9 by 9	9 by 9
	.....	11¼ by 11¼	11¼ by 11¼
	.....	6¾ by 13½	6¾ by 13½
3¼ inches.	.....	6½ by 13	6½ by 13

Pre-finished Hardwood Flooring

When hardwood flooring is produced in unfinished form, sanding and other finishing operations are performed after the floor has been installed. Some manufacturers produce flooring which is completely pre-finished at the factory. It is ready for use immediately after being laid. All species and types of hardwood flooring may not be readily available in this form; but a manufacturer equipped to make factory finished flooring usually can furnish it in any species and type he ordinarily produces unfinished.

GRADING OF HARDWOOD FLOORING

Oak Flooring (Quarter-Sawed)—Standard Grades

Clear—The face shall be practically free of defects except ⅝ of an inch of bright sap. The question of color shall not be considered.

Bundles to be 2 ft. and up, not to exceed 20% under 4 ft. Average length 5 ft.

Sap Clear—The face shall be practically free from defects but will admit unlimited bright sap. The question of color shall not be considered.

Bundles to be 2 ft. and up, not to exceed 20% under 4 ft. Average length 5 ft.

Select—The face may contain sap, and will admit pin worm holes, streaks, slight imperfections in working or a small tight knot, not to exceed one to every 3 ft. in length.

Bundles to be 2 ft. and up. Average length 4 ft.

Oak Flooring (Plain-Sawed)—Standard Grades

Clear—The face shall be practically free of defects except ⅝ of an inch of bright sap. The question of color shall not be considered. Bundles to be 2 ft. and up, not to exceed 20% under 4 ft. Average length 5 ft.

Select—The face may contain sap, and will admit pin worm holes, streaks, slight imperfections in working or a small tight knot, not to exceed one to every 3 ft. in length. Bundles to be 2 ft. and up. Average length 4 ft.

No. 1 Common—Shall be of such nature as will make and lay a sound floor without cutting. Bundles to be 2 ft. and up. Average length 3 ft.

No. 2 Common—May contain defects of all characters, but will lay a serviceable floor. Bundles to be 1¼ ft. and up. Average length 2½ ft.

The above applies to tongued and grooved strip flooring and, with minor exceptions, to square-edge flooring. The points of variance in square-edge are: Quarter-sawed and plain-sawed Clear is bundled 2 ft. and up, average length 5½ ft.; quarter-sawed and plain-sawed Select bundled 2 ft. and up, average length 4½ ft.; No. 1 Common bundled 2 ft. and up, average length 3½ ft.

1¼ Ft. Shorts—Short pieces of strip flooring can be obtained in special bundles designated as 1¼ Ft. Shorts. Pieces in these bundles may range from 9 to 18 inches long, but they must average 15 inches. There are two grade classifications of 1¼ Ft. Shorts: 1) Pieces grading No. 1 Common, Select and Clear under the standard grading rules are bundled together and designated as No. 1 Common & Better; 2) pieces grading No. 2 Common are bundled separately and designated as such.

Hard Maple, Beech, Birch Flooring—Standard Grades

First Grade—Shall have the face practically free of all defects, but the varying natural color of the wood shall not be considered a defect. Standard lengths in all widths in this grade shall be trimmed 2 to 16 ft. as the stock will produce; the proportion of lengths 2 to 3½ ft. inclusive, shall be what the stock will produce up to 25%.

Second Grade—Will admit of tight, sound knots and slight imperfections in dressing, but must lay without waste. Standard lengths in all widths in this grade shall be trimmed to 1½ to 16 ft., as the stock will produce; the proportions of lengths 1½ to 3½ ft., inclusive, shall be what the stock will produce up to 40%.

Third Grade—Must be of such character as will lay and give a good serviceable floor. Standard lengths in all widths in this grade shall be trimmed 1 to 16 ft. as the stock will produce; the proportion of lengths 1 to 3½ ft., inclusive, shall be what the stock will produce up to 60%.

Special Grades—First Grade White Hard Maple is special stock, selected for uniformity of color. It is almost ivory white and is the finest grade of Hard Maple Flooring that can be produced.

First Grade Red MFMA Beech and MFMA Birch are special grades produced from all red-faced stock, and are specially selected for color. The color is rich, being a soft tint which lends to these two woods an individuality found in no other species.

Pecan Flooring—Standard Grades

First Grade—Shall be practically free of defects, but the varying natural color of the wood shall not be considered a defect. Bundled 2 to 16 feet, not over 25% of the footage shall be 2 and 3 feet.

First Grade Red—Same as First Grade except shall be made from all Heart wood.

First Grade White—Same as First Grade except shall be made from all bright Sap wood.

Second Grade—Will admit of tight sound knots, pin worm holes, streaks and slight imperfections in working. Bundled 2 to 16 feet, not over 30% of the footage shall be 2 and 3 feet.

Second Grade Red—Same as Second Grade except shall be made from all Heart wood.

Third Grade—Shall be of such nature as will make and lay a sound floor without cutting. Bundled 2 to 16 feet, not over 50% of the footage shall be 2 and 3 feet.

Fourth Grade—May contain defects of any character so long as will lay a serviceable floor. Bundled 1¼ to 16 feet.

PRE-FINISHED FLOORING

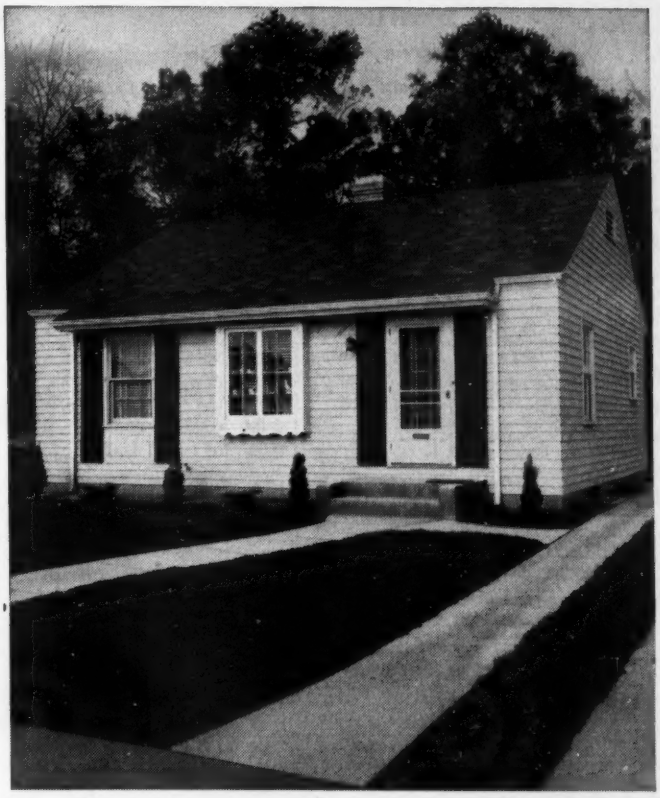
Prime—Face shall be selected for appearance after finishing, but sapwood and the natural variations of color are permitted. Minimum average length 4 feet. Bundles 2 feet and longer.

Standard and better—A combination of prime and standard to contain the full product of the board except that no pieces are to be lower than standard grade. Minimum average length 3½ feet. Bundles 1¼ feet and longer.

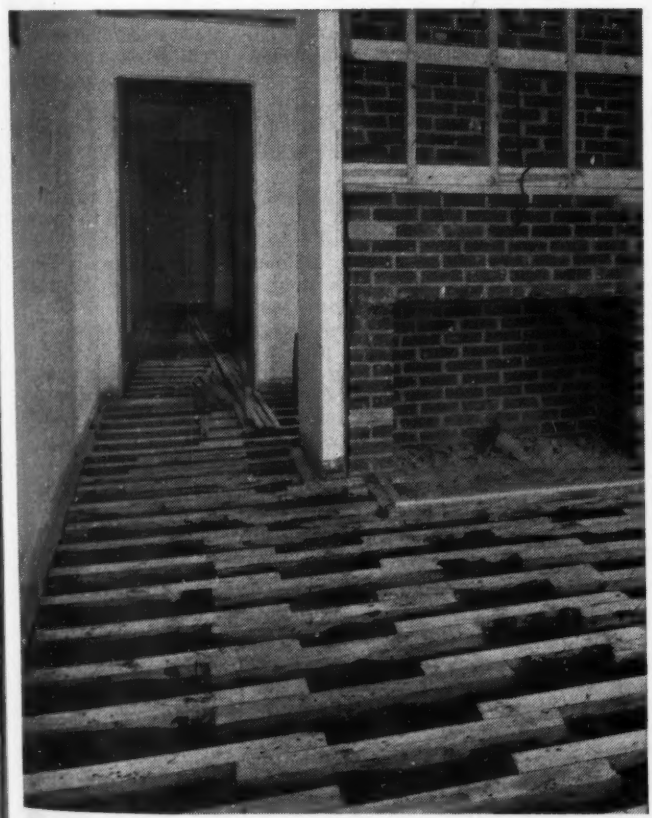
Standard — Will contain sound wood characteristics which are even and smooth after filling and finishing and

OAK LAID OVER CONCRETE SLAB MEANS MORE SALES AND PROFIT

Builders can now include all the basic fundamentals in new, low-cost homes



Your builder-customers will concentrate on building low-cost homes in 1952. "Low-cost" does not mean that the basic fundamentals—"healthfulness", durability, beauty and economy need be neglected. Cost cuts can be made in the finishing "frills" and over-all size.



You can increase your own sales and help your builder-customers include the benefits of oak flooring in their new homes by telling them about the new method of laying oak over concrete slabs.* Using screeds set in mastic—even —the lowest priced homes can now have oak.

The ease-of-maintenance that comes with an oak floor is one of the important reasons why 85% of all prospective home-owners demand oak in their new homes. Just a few strokes of a dust-mop is all it takes to keep an oak floor looking brand new.

*SEND TO NATIONAL OAK FLOORING MFRS. ASS'N., STERICK BLDG., MEMPHIS 3, TENN., FOR FREE, FHA-APPROVED INSTRUCTIONS FOR LAYING OAK OVER CONCRETE

SHORT CUTS

In figuring hardwood flooring

Figures below are board feet of various sizes of flooring required to cover square feet of floor space shown at left.

Square Feet Floor Space	25/32x3¼	25/32x2¼	25/32x2¼	25/32x1½	½x2½	½x2	⅜x2	⅜x1½
10	12	13	13	15	12	12	12	13
20	25	26	27	30	24	25	25	27
30	37	39	40	45	36	38	38	40
40	49	51	53	60	48	50	50	53
50	62	64	67	75	60	63	63	67
60	74	77	80	90	72	75	75	80
70	87	90	93	105	84	88	88	93
80	98	102	107	120	96	100	100	107
90	111	115	120	135	108	113	113	120
100	124	128	133	150	120	125	125	133
200	247	255	267	300	240	250	250	267
300	371	383	400	450	360	375	375	400
400	494	510	533	600	480	500	500	533
500	618	638	667	750	600	625	625	667
600	741	765	800	900	720	750	750	800
700	865	892	933	1050	840	875	875	933
800	988	1020	1067	1200	960	1000	1000	1067
900	1112	1148	1200	1350	1080	1125	1125	1200
1000	1235	1275	1333	1500	1200	1250	1250	1333

No allowance has been made in these figures for cutting waste.

will lay a sound floor without cutting. Minimum average length 3 feet. Bundles 1¼ feet and longer.

Tavern—Shall be of such nature as will make and lay a serviceable floor without cutting, but purposely containing typical wood characteristics which are to be properly filled and finished. Minimum average length 2¼ feet. Bundles 1¼ feet and longer.

Grading rules for beech and pecan. Will be furnished only in a combination grade of tavern and better.

Tavern and better—A combination of prime, standard and tavern to contain the full product of the board except that no pieces are to be lower than tavern grade. Minimum average length 3 feet. Bundles 1¼ feet and longer.

STORING AND HANDLING HARDWOOD FLOORING

Certified hardwood flooring is kiln-dried at the factory to a low moisture content. Moisture content later equalizes itself, however, to the moisture condition in the area where the flooring is used.

For best results the flooring must be protected from the elements during storage and delivery. This guards against excessive shrinkage or expansion which may cause cracks or buckling after the floor has been laid.

Don't store or lay flooring in a cold or damp building. Wait until the plaster and cement work have dried thoroughly and the woodwork and trim have been installed.

Especially in winter construction, the building in which the flooring is to be used should first be heated to 70° F. Then the flooring should be piled loosely in the building at least four or five days before being laid. This permits the flooring to reach a moisture content that is in balance with that of the building.

LAYING HARDWOOD FLOORING

Strip Flooring

For most satisfactory results in conventional joist construction, it is generally recommended that hardwood strip flooring be laid on a soundly constructed subfloor about an inch thick. Subfloor boards preferably should be no wider than 6 inches and should be spaced about ⅛-inch apart. They should be face nailed solidly at every bearing point with two 10-penny nails. All butt joints should rest on bearings. If wider boards are used, there should be extra nailing at each bearing. The 6-inch boards, however, are recommended because they are subject to less shrinkage and expansion. Inadequate nailing of subfloor boards often results in squeaky floors.

Subfloors generally should be laid diagonally. Added bracing strength is given a building if the diagonal direction is reversed on alternate floors.

Strip floors preferably should be laid lengthwise of the building, that is, at right angles to joists. If applied over old finish floors, however, they should be at right angles to them. In modern home construction thresholds between adjoining rooms are omitted. Floor strips should run continuously through doorways.

Strip flooring, provided it is tongued and grooved and at least 25/32-inch thick, can be installed successfully in homes and other buildings of concrete slab construction by laying the strips directly on wood screeds or sleepers properly secured to the concrete. There are several ways in which this can be done.

A relatively new, economical and speedy method gaining popularity among builders involves laying the screeds in asphaltic mastic, wide side down. In this procedure the screeds preferably should consist of pine 2 x 4s, 24 to 36 inches long. They are laid at right angles to the proposed direction of the finish flooring and are applied in a staggered pattern with ends lapped from 2 to 6 inches. Screed courses are 12 inches on centers. The mastic is allowed to harden at least 24 hours before the finish flooring is applied. Screeds thus remain permanently secure. The strip flooring is applied in the usual manner. As in any well engineered concrete slab installation, of course, adequate protection against moisture must be provided. This customarily takes the form of a two-course membrane of hot asphalt or pitch and 15 lb. felt. It can be placed either directly over the fill before the concrete is poured, or on top the concrete after it hardens.

In another successful method of providing a sound nailing surface for the strip flooring, steel clips or anchors, 12 or 16 inches on centers, are set in the concrete before it hardens. After the concrete has set, 2 x 2s extending the full width of the room are inserted in the clips or anchors and nailed to them through holes provided for that purpose. An alternate technique is to set the clips or anchors in grout rather than in the slab. A third system consists of imbedding 2 x 2s directly in the concrete, 12 to 16 inches on centers. Less economical than the staggered screed method, these three systems are seldom employed for homes. They are used extensively, however, for apartment buildings, commercial structures and other large buildings.

In structures where unusually heavy traffic is anticipated or heavy machinery and equipment are to be used, it is advisable to install a wood subfloor over the screeds or sleepers.

A good quality building paper, the type known as 15 pound asphalt, saturated felt should be laid between the subfloor and the finish floor. Besides absorbing moisture which otherwise would permeate the finish floor, the building paper prevents dust from seeping through the floor seams. In basement installations the building paper should be placed directly over the concrete. For rooms directly over heating plants double weight building paper or standard insulating board is recommended. Applied either on the basement ceiling or between floor joists, these provide protection against excessive heat which might cause the floor to buckle.

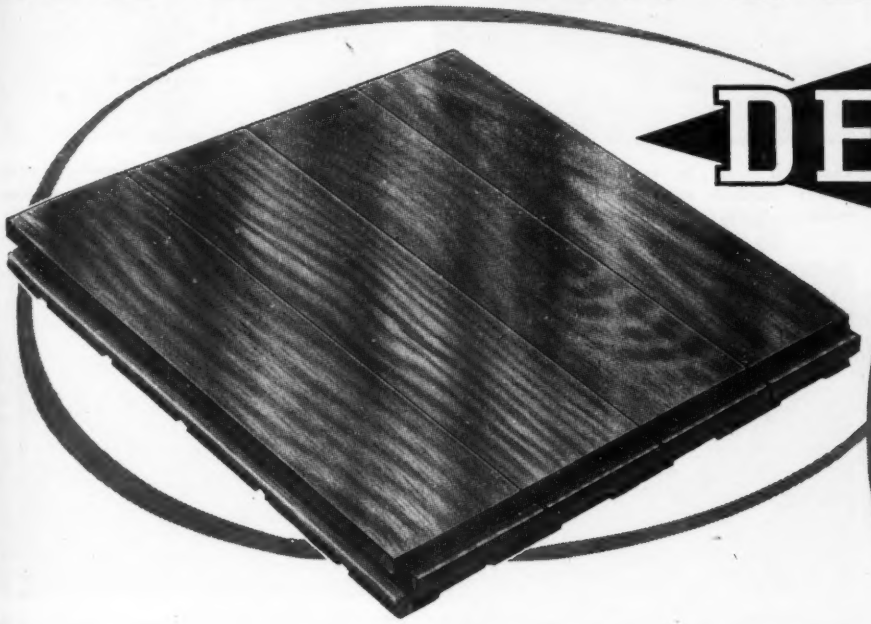
Strip flooring should not be laid tight against studding or walls. An expansion space of not less than ½-inch should be allowed.

In laying tongued and grooved or square-edge flooring over a wood subfloor, or tongued and grooved flooring over screeds or sleepers, it is not necessary to make end joints occur over bearing points. Ends should be staggered, however, to avoid having several grouped closely. When subflooring is laid at right angles to the finish flooring, as is sometimes the case, care must be taken that nails through the finish flooring do not srike subflooring joints. When no wood subflooring is used, there should be nailing at each screed or sleeper.

Tongued and grooved strips always should be toe-nailed, that is, with the nails at the end of each piece driven through the tongue at an angle of 45 to 55 degrees. The floorings also should be blindnailed, that is, set with a nail-set. Square-edge strips, of course, are face-nailed.

Plenty of nailing is of paramount importance. If an insufficient number of nails is used, the flooring pieces may become loose in time and develop squeaks. Follow an approved nailing schedule. Usually one can be obtained from the flooring manufacturer. Ordinary wire

YOUR BEST BUY IN BLOCK FLOORS



DELFAIR

Oakblok

READ THESE FACTS ABOUT POPULAR DELFAIR OAKBLOK

DELFAIR Oakblok offers to builders a truly distinctive floor, one that is equally suitable for small or large homes, commercial structures, housing projects, schools and institutions. It is epecially adaptable to economical installation over concrete.

DELFAIR Oakblok is available in all standard strip flooring grades and also in the following special grades: Prime, Standard and Better, Standard, Tavern and Better and Tavern.

DELFAIR Oakblok is made of either Red Oak or White Oak, and is available either unfinished or prefinished.

DELFAIR Oakblok comes in the following sizes: 25/32" x 6¾" x 6¾", 25/32" x 7½" x 7½", 25/32" x 9" x 9", ½" x 8" x 8" and ½" x 10" x 10". All blocks are steel spline joined.

DELFAIR Oakblok's milling characteristics: tongue and groove end-matched—slight vee-edge on prefinished blocks — cross-wise grooves spaced to insure better mastic adhesion.

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- ★ Prefinished
- ★ Oakblok
- ★ Plank
- ★ Square Edge Strip

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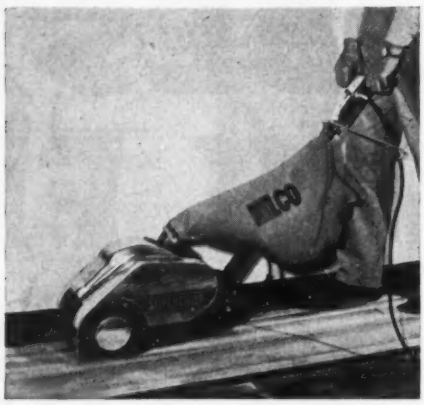
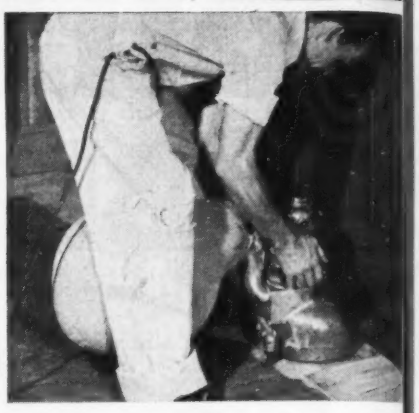
LOUISVILLE, MISSISSIPPI

MEMBER N.O.F.M.A.

HARDWOOD FLOORS, with proper care and maintenance, remain beautiful indefinitely. Even those allowed to become worn and stained, may be restored to original beauty.



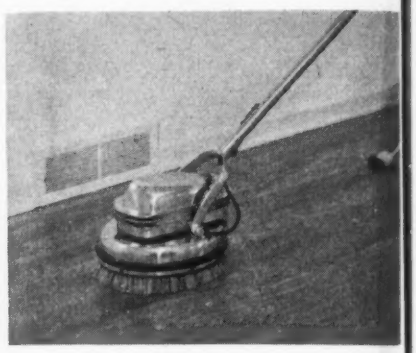
The first step in refinishing is sanding. Power sanders such as this do the job quickly, accurately, and economically.



Edges are sanded with a smaller machine called an edge sander. In all, three grades of paper are used, from coarse to fine.

The sanded surface may be stained, or may be given a natural filler directly on the raw wood, according to the tone desired.

After the filler is dry, two or three coats of varnish are applied, with plenty of drying time allowed between coats.



The final step is a thorough waxing. After that, frequent cleaning and waxing will keep the floors in excellent condition.

flooring nails are satisfactory for most sizes of strip flooring. However, many flooring mechanics, in laying the commonly used sizes, now prefer cut nails or the spirally grooved type known as screw nails.

Plank Flooring

In plank flooring each piece, in addition to being blind-nailed, should be face-nailed about every 30 inches. The ends of each piece also should be fastened to the subfloor with countersunk screws. Wood plugs glued in the plank conceal screwheads and lend decorative effect.

The recommendations regarding subfloors for strip flooring also apply to plank flooring.

Parquetry Flooring

Parquet flooring, including prefabricated blocks, may be nailed over a wood subfloor or old finish floor, or it may be laid in mastic over concrete. Preferably the subfloor should cross the joists at right angles rather than on a diagonal. When it is installed before the type of finish flooring has been decided upon, it is best to lay it at a 60 degree angle. This "compromise" construction will make it adaptable to any type of flooring.

Where a concrete floor is involved, some manufacturers strongly recommend that a wood subfloor be laid in mastic over the concrete and that the finish flooring be nailed to it.

When parquetry is to be laid in mastic directly over concrete, extreme care must be taken that the concrete surface is perfectly clean, dry and level. Brushing the surface with a hair broom is recommended for ridding the concrete of loose dirt. A heavy coat of asphalt primer should be then applied evenly, brushed in well, and allowed to dry for 24 hours before the mastic is applied and the finish floor laid. Mastic usually is spread to a minimum average thickness of 3/32-inch.

When parquetry is to be laid over concrete that is directly on the ground or over unventilated spaces, and there is a consequent danger of floor dampness, the concrete floor should be first waterproofed. This may be done by applying a coat of hot asphalt and covering it with asphalt saturated felt. In cases where the dampness is excessive, use three layers of felt, with asphalt rolled smoothly on each layer. If there is danger of water seepage, use five layers.

ESTIMATING FLOORING REQUIREMENTS

To cover a certain space, figure the number of square feet, which means the width multiplied by the length; for instance, a room 12 feet wide by 15 feet long would contain twelve times fifteen or 180 square feet. Add to the square feet of surface to be covered the following percentages:

50% for	$\frac{25}{32}$"x1½"
37½% for	$\frac{25}{32}$"x2"
33⅓% for	$\frac{25}{32}$"x2¼"
24% for	$\frac{25}{32}$"x3¼"
33⅓% for	⅜"x1½"
25% for	⅜"x2"
33⅓% for	½"x1½"
25% for	½"x2"

The above figures are based on laying flooring straight across the room. Where there are bay windows or other projections, allowances should be made for additional flooring. It is always well to order 5% additional flooring to take care of floor layers' cutting and possible damage if carelessly handled.

FINISHING HARDWOOD FLOORING

Preparing the Surface

Sanding or scraping: Although certified unfinished hardwood flooring is smoothly surfaced at the factory, scratches and other slight marks caused by handling usually appear when the floor has been laid. These may be removed by sanding or scraping, preferably by a specialist in that line. Nowadays an electrically operated sanding machine generally is used for this work, since sanding or scraping by hand is laborious and time consuming. For fine floors most manufacturers advise at least four sandings, starting with No. 2 sandpaper and graduating down to No. ½, No. 0 and No. 00. A final buffing with No. 00 or No. 000 sandpaper assures an even smoother surface. Many authorities say that best results are obtained when the final traverse is made by hand.

Protecting the Surface: After the final sanding or buffing, the floor should be swept clean. Windows, window

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sills, doors, door frames and baseboards, as well as the floor itself, should be dusted carefully with a painter's tack rag. The floor should be protected from traffic until after the stain, filler or first finish coat has been applied and is dry. Any footmarks that appear should be wiped off.

Staining: It is important that the first coat of stain or other finish be applied the same day as the last sanding. Although stain is used extensively to achieve color effects other than the natural color of the floor, pigmented filler has been found more satisfactory. Unlike most stains, filler is resistant to light and therefore does not fade in spots exposed to brightness. Stain can be used with good results, however, if pigmented filler is applied afterward. When used, it should be put on before any other finishing material. It should be applied evenly, preferably with a brush 3 or 4 inches wide. Only medium or dark stains are recommended for No. 1 and No. 2 Common oak grades. Other grades of oak will take dark tones well, but their beauty of grain shows to better advantage when a light shade is employed.

Use of wood filler: Paste wood filler frequently is used to fill the minute surface crevices in oak and other hardwoods having large pores. It gives the floor the perfectly smooth surface required for a lustrous appearance. It is recommended for all oak floors except when the finish to be applied consists of a type of floor seal which contains a filler ingredient. Pigmented filler, as explained above, should be used to impart color. For natural color floors a colorless filler can be obtained. Proper time for applications varies with circumstances. If stain has been used, for example, filler often is applied immediately after the stain has dried thoroughly. If the floor is left unstained, and the finish is to be varnish, shellac or lacquer, filler generally should be applied just after the final sanding. When used in conjunction with certain kinds of floor seal, it should be put on after the seal. Before using filler, therefore, one should know exactly what kind of finish is to be employed and what procedure the finish manufacturer recommends.

Type of Finish

The ideal qualities of a finish for hardwood floors are: 1) attractive appearance; 2) durability; 3) ease of maintenance; 4) capacity for being retouched in worn spots without revealing a patched appearance. Additionally, when a finish is applied to high grade flooring of considerable natural beauty, it usually should be transparent in order to accentuate that beauty. The three principal types of finishes are: floor seal, varnish and shellac. Lacquer also is used occasionally.

Penetrating Seal: Penetrating seal, a relatively new type material, is being used on an increasingly large scale for residential as well as heavy duty flooring. It differs from other finishes in this important respect: rather than forming a surface coating, it penetrates the wood fibers, sealing them together. In effect it becomes a part of the wood itself. It wears only as the wood wears, does not chip or scratch and is practically immune to ordinary stains and spots. While it does not provide as shiny an appearance as other finishes, it has the advantage of being easily retouched. Worn spots may be refinished without presenting a patched appearance. Floor seals are available either colorless or in color.

Varnish: Varnish presents a glossy appearance, is quite durable, fairly resistant to stains and spots, but will show scratches. It is difficult to patch worn spots, however, without leaving lines of demarcation between the old and the new varnish. New types of varnish dry in eight hours or less. Like the other types of finish it gives satisfactory results if properly waxed and otherwise maintained.

Shellac: One of the chief reasons shellac is so widely used is its quick-drying property. Workers, starting with floors in the front of a house and shellacking toward the rear, may begin applying the second coat by the time they have finished the first. Shellac spots rather readily if water or other liquids remain on it long. It is transparent and has a high gloss. It does not darken with age as quickly as varnish.

Sometimes used is a combination varnish-shellac finish which embodies most of the advantages as well as the disadvantages of each material.

Lacquer: Lacquer is a glossy finish with about the same durability as varnish. Because it dries so rapidly it requires considerable skill in application. Worn spots may be retouched with fairly good results, since a new coat of lacquer dissolves the original coat.

Waxing

All hardwood floors should be waxed after the finish has dried thoroughly. In some cases two or three coats are recommended for best results. Wax not only imparts a lustrous sheen to a floor, but forms a protective film that prevents dirt from penerating the wood pores. When it becomes dirty, it is easily removed and new wax applied.

Floor wax is available in two forms—paste and liquid. The liquid type recommended for hardwood floors is known as rubbing wax.

RENTING FLOOR SANDING MACHINES

An increasing number of dealers today are establishing and operating floor sanding machine rental service—another profitable adjunct to not only the flooring and floor covering department but the paint department as well.

The Rental Market

The rental market for sanding machines consists of home owners (men who are amateur mechanics and like to do odd painting and fixing-up jobs around the house) who desire to sand and re-finish their own floors. In addition, many carpenters and painters do not own their own floor sanding equipment and rent machines extensively.

While the subject of operating a rental floor sanding department is discussed in more detail in Section 6, Power and Hand Tools, there are a few considerations relating to the mechanics of the department that should be covered here.

Refinishing Old Floors

Whether using rental or privately-owned floor sanding equipment, the skill of the operator and the use of the correct coated abrasive materials are of prime importance to producing quality finishes. However, desired finishes can be secured only by using the correct abrasive grit sequence.

For this purpose, two types of floor surfacing abrasives have been designed for the specific steps in floor sanding. They are: The Type "F" sheets—composed of a paper and cloth combination backing—which are coated with "coarse" grit silicon carbide mineral grains, and are used exclusively for first-sanding on old floor surfaces.

And . . . The Type "E" sheets—paper backed—which are made with coatings of either "medium" or "fine" grits of silicon carbide. Both coatings are used on old and new floors for bringing them to an even surface.

In the preparation of old floors that have been previously finished with thick coats of old paint, varnish or wax, three separate sanding operations are required.

The recommendations which follow outline the correct grits and sanding procedure:

1. For the removal of heavy coats of old paint, varnish or wax finishes, the Type "F," No. 3½ or 4 grit silicon carbide abrasive should be used. Due to its extremely fast cutting action, the No. 4 grit should be used with care to avoid gouging or burning the floor surface.

   A covering of this type is tough enough to abrade the old surface off rapidly, and the abrasive's spaced mineral coating minimizes loading or filling of the sanding surface. This sanding step should continue until most of the old finish has been removed.

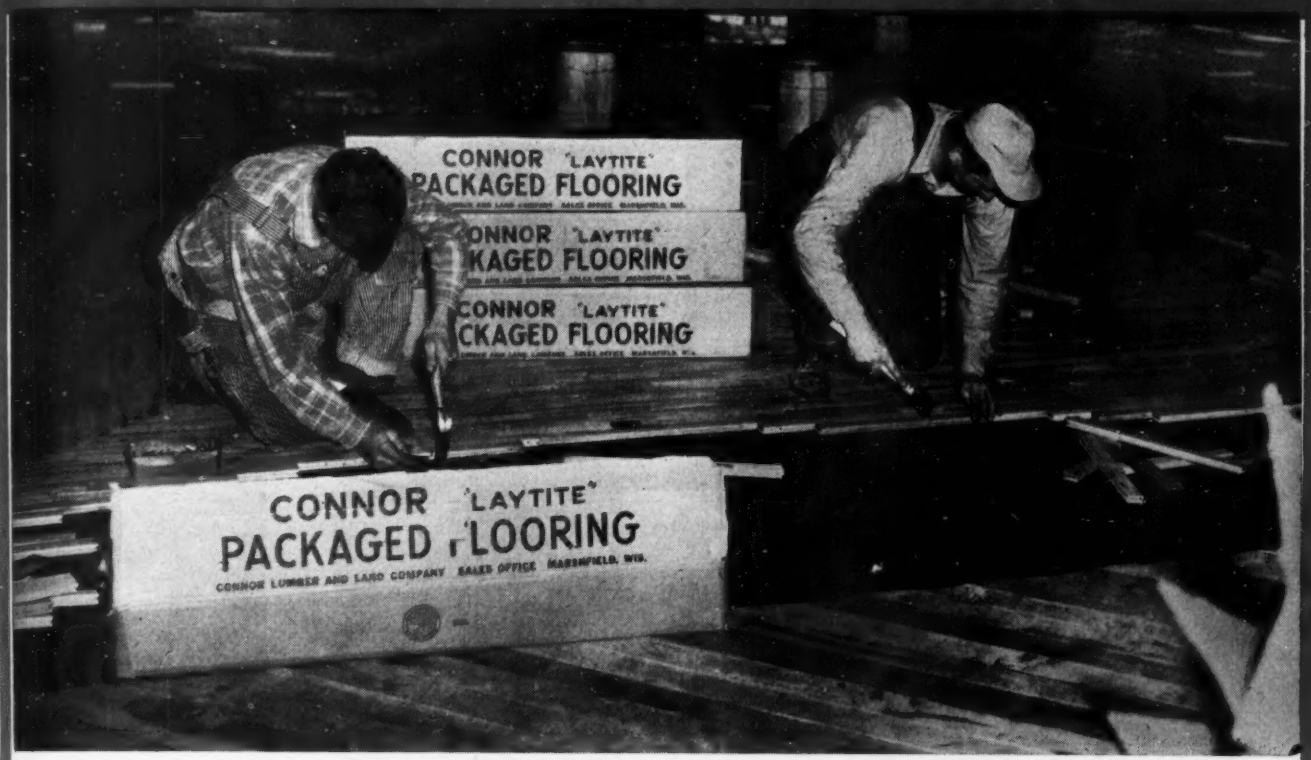
2. For the next two steps the Type "E" material should be used. This close-coated (closely spaced grains) material in either a No. 2 or 2½ grit is coarse enough to remove any remaining traces of the old finish, while doing a fast job of leveling off irregularities of the floor surface.

3. For the final sanding either No. 1/0 or 1/2 grit should be used. The fineness of this sanding will remove scratches left by the preceding operations, and bring the floor to an even surface, ideal for receiving any finish coat desired.

In general, all floor sanding operations should be done in the direction in which the floor boards run. The one exception, however, being when old floors are exceptionally uneven or when edges of the individual boards are warped. Here, the initial sanding cut may be made diagonally across the floor boards, with all later cuts made in the normal direction.

CONNOR "LAYTITE" FLOORING IN CARTONS

(or Regular Lengths in Bundles)



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1. Blocks or Herringbone — for concrete sub-floors
2. Long strips in bundles
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Pine, Hemlock and
Hardwoods
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When the Youth Center Building of the Catholic Church in Thorp, Wis., was first built, a composition substitute floor was installed. Results were unsatisfactory. But how to rectify the situation without tremendous expense? CONNOR "LAYTITE" FLOORING was the answer. A wood sub-floor was laid over the composition flooring and then "Laytite" was installed. RESULT — a beautiful, permanent Maple floor that's entirely satisfactory in every respect.

Connor "Laytite" Flooring is a fast seller. It means more profits for you because it cuts your inventory and handling costs.

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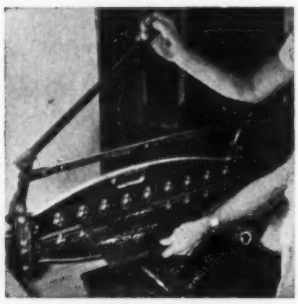
SPECIALLY fabricated underlayment is available for carpet, asphalt and linoleum tile. The product shown is reasonably priced and easy to apply.

FLEXIBLE rubber baseboards are now available for use with tile applications. The material cuts easily with a knife and is held firmly in place with adhesive.

WHEN APPLYING asphalt tile over a smooth, clean concrete surface, the mastic is applied directly on the concrete.

THE TILE IS then laid, care being taken to insure straight, even rows. Moderate pressure is applied to insure proper setting.



TILE CAN BE cut with specially made tile cutters, a blow torch, or a hack saw. Cutting is necessary in finishing off areas, around doors, etc.

RUBBER OR composition baseboards are available to complete the job. This is applied after the tile is laid and set.

ASPHALT TILE

Asphalt tile, which is available in a wide range of plain and marbelized colors, was developed primarily for use in basement and on-grade areas where linoleum and most other flooring materials usually are not recommended because of the presence of moisure and alkali. But it is also suitable for any installation, on, below, or above grade. Greaseproof asphalt tile, conductive asphalt tile, and industrial asphalt tile have been developed for installation under special conditions.

Composition and Manufacture

Asphalt tile is composed of a thoroughly blended composition of thermoplastic binder of the asphaltic or resinous type, asbestos or cotton fibres, and inert materials as fillers or pigments. It is formed under pressure while hot, and is then cut to size.

Physical Characteristics

Asphalt tile has many inherent characteristics which are leading to its rapidly expanding use in the light construction field and other markets served by the building products dealer. Its first cost compares favorably with that of other flooring. Asphalt tile units are pre-cut to size, eliminating practically all waste and permitting easy and economical installation. Among the physical characteristics of asphalt tile are the following:

Long wear—Asphalt tile is durable, tough and resists abrasion, all of which makes for long service under hard use. Made principally of two practically indestructible materials, it cannot rot and will not dry out.

Moisture resistance—Its high resistance to moisture makes it the only resilient flooring that can be satisfactorily installed below grade.

Resilience—Because of its innate resiliency, it is quiet and comfortable to walk on. When used in light manufacturing areas it is easy on the workers' feet.

Fire resistance—Being a combination of inorganic minerals, it is highly fire resistant.

Attractive colors—The wide variety of plain and marbleized colors in which asphalt tile is furnished, makes possible an infinite number of patterns and color combinations. Thus floors can be built to harmonize with any type of interior decorations.

Easy maintenance—Asphalt tile is odorless, non-absorbent and will not originate dust. It is easily cleaned with a mop, and requires no waxing or further maintenance, although if a highly polished floor is desired, it can be waxed to a lustrous finish.

Quick installation—The convenient sizes of asphalt tile units permit rapid installation, with a minimum of disturbance to business routine.

Immediate use—As soon as it is laid, it is ready for use.

Dimensions of Asphalt Tile

Asphalt tile is manufactured in two common thicknesses: ⅛ inch and 3/16 inch.

The sizes of tile are 6″x12″, 9″x9″, and 12″x12″.

Border tile are made 18″x24″, and are cut to the required width on the job.

Half tile (cut diagonally) is made in 9″x9″ and 12″x12″ sizes.

Feature strips are made 1″, 1½″, 2½″, and 3″ in width.

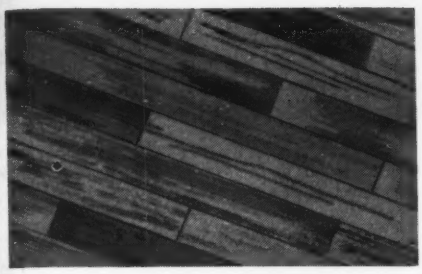
Set-on Cove Base (in black only) is made in approximately 4″ and 6″ heights.

Colors of Asphalt Tile

The various colors obtainable in asphalt tile include plain colors and marbleized colors. Among the plain colors available are black, dark red, light red, medium red, white, cream, blue, dark green, light green, light gray, tan and buff. Marbleized colors include background colors corresponding to the plain colors above mottled with any one or more of a number of wide range of colors.

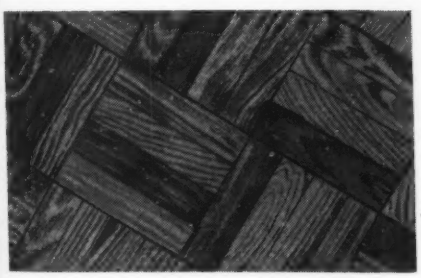
STRIP

Holt Strip Flooring is available in Maple, Birch, Beech or Wisconsin Oak. It's accurately tongued and grooved, easily laid by the flooring professional or amateur. All standard thicknesses and widths.



BLOCK

Holt Block Flooring is available in Maple, Birch, Beech or Wisconsin Oak. Ideal for installing directly over concrete or wood subfloors. Laid in mastic or nailed.



HERRINGBONE

An interestingly patterned flooring for use in homes, offices, public buildings, etc. Available in Maple, Birch, Beech or Wisconsin Oak. Laid in mastic or nailed.

THE *finest* FLOORING YOU CAN SELL!

Holt Flooring has *everything* that good flooring should have.

It's made from scientifically kiln dried stock. It's precision manufactured. It's accurately graded in accordance with Maple Flooring Manufacturers Association standards.

It's unsurpassed for industrial, commercial, institutional or home flooring jobs.

SELL THIS TIME TESTED FLOORING

There are no two ways about it — you simply cannot beat Holt Flooring for quality and value.

Thicknesses: 3/8 — 5/8 — 25/32 — 33/32 — 41/32 — 53/32

Widths: 1-1/4 — 1-1/2 — 2 — 2-1/4 3-1/4 — 3-3/8 — 3-1/2

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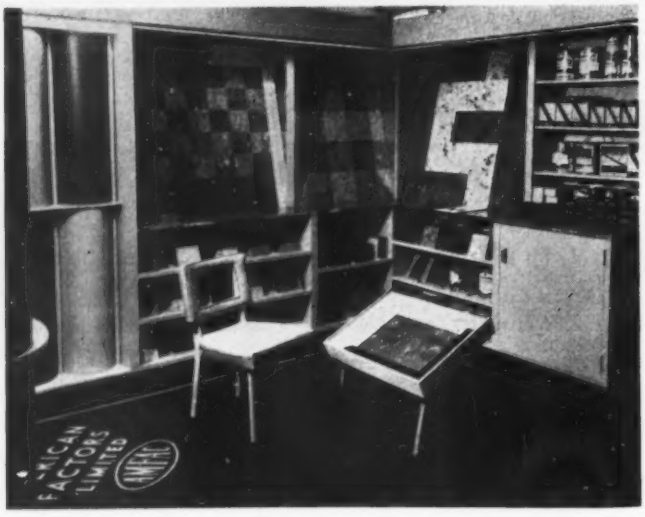


DISPLAYS of floor coverings have progressed greatly in recent years. This modern showroom of American Factors, Ltd., Honolulu, T. H., has everything available for efficient selling.

NEW designs in tile are especially planned to blend perfectly in combination dining-room kitchens. Available in many pleasing colors, the tile shown has a textured design.

Installation of Asphalt Tile

Asphalt tile is a thermoplastic material and for its satisfactory performance, the sub-floor must be smooth, sound, firm and free from springiness. It will follow the exact contour of the underfloor; consequently, all irregularities must be removed.

Over wood sub-floors—Wood sub-floors should be of double construction and of sufficient structural strength to carry intended loads without deflection. The surface shall be of well seasoned, kiln dried tongue and groove flooring not over 3" face width, topnailed and toenailed. The surface flooring shall have been sanded to a uniform smooth surface and shall contain no cupped or springy boards.

In the event that the sub-floors are so rough or uneven that they are unsuitable for the direct application of asphalt tile, a suitable underlayment board or suitable underlayment as recommended by the manufacturer of the asphalt tile should be installed.

Under no circumstances should asphalt tile be laid over wood sub-floors which are subject to conditions which might cause buckling or rotting of the wood. This condition occurs generally on wood floors that are below-grade, on-grade, or above the ground and without heat or adequate ventilation underneath the floor.

Over concrete sub-floors—New concrete sub-floors should be troweled to a smooth plane surface; free from score marks, grooves or depressions; scraped free from all foreign material and brushed clean.

Old concrete sub-floors should be clean and free from all floor coverings or other surface treatments. Paint must be removed from floors in direct contact with the ground. Expansion joints and score marks should be filled in accordance with the recommendations of the manufacturer furnishing the asphalt tile.

In the event that the sub-floor is so rough or uneven that it is unsuitable for the direct application of asphalt tile, a suitable underlayment as recommended by the manufacturer of asphalt tile should be installed.

Note: The Asphalt Tile institute has prepared a detailed set of "Recommended Specifications for the Installation and Maintenance of Asphalt Tile Flooring." A copy of this specification may be obtained without charge by writing to the institute's office at 101 Park avenue, New York 17, N. Y.

CORK TILE

For interiors where quiet, comfort and dignity are of paramount importance, cork tile is an excellent flooring material. It is made of pure high-grade cork shavings, compressed and baked in molds. The natural resins in the cork bind the particles together, producing a closely knit, long-wearing and resilient tile.

Footsteps on cork tile floors make almost no sound. The natural resilience of cork cushions every step. This not only reduces noise but also reduces fatigue for people standing or walking on these floors. As cork provides insulation against heat and cold, cork tile is comfortable underfoot. Cork tile will not "dust" or crumble and has exceptional non-slip qualities.

Cork tile is particularly suited for floors in residential bedrooms and bathrooms where a warm and resilient floor adds to underfoot comfort. In addition, dealers have a ready-made market in local libraries, offices and reception rooms where dignity is required.

RUBBER TILE

A wide variety of rubber tile floorings is available, and the selections of colors and patterns permit their incorporation in connection with any decorating scheme.

Rubber tile is recommended where long service is a requisite, or where traffic is severe.

Both natural and synthetic rubber are used in the manufacture of tiles, although in many respects synthetic rubber has indicated a superiority. Most products are a combination of the rubber and cotton or similar fiber, blended and formed to the desired dimensions and thickness by a number of exclusive processes.

The fiber adds to the beauty as well as the performance requirements of the tile, in that it prevents colors from running together during manufacture and provides an exceptionally clean cut appearance in marbelized or other blended finishes.

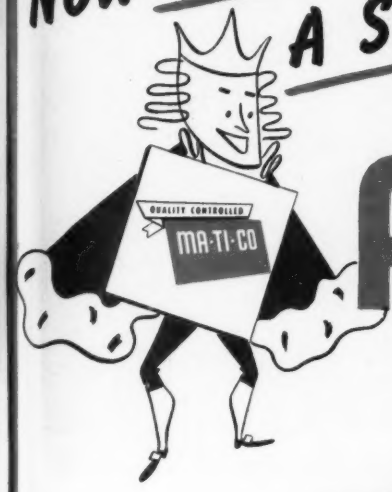
Because of its toughness, rubber tile and particularly that with fiber reinforcing, can withstand high condensed loads such as furniture or similar objects present.

Periodic buffing with No. 1 steel wool is recommended as a maintenance procedure to restore the luster and to help keep the rubber tile in prime condition. Cigarette burns and unusual surface stains can be easily removed in this manner.

LINOLEUM

In the minds of some people, practically all resilient-type floor coverings are known as "linoleum." Actually, however, linoleum is one of a number of resilient floorings, including resilient tiles like asphalt tile, rubber tile, and cork tile, and printed felt-base rugs and floor coverings. The latter consist of a durable enamel coating baked on an asphalt-saturated felt backing.

Now MATICO brings you A SUPERIOR NEW PLASTIC FLOORING in low-cost standard gauge



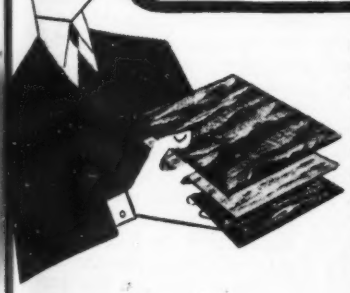
ARISTOFLEX

THE ARISTOCRAT OF RESILIENT FLOORING

IT CAN BE EASILY INSTALLED ON, ABOVE OR BELOW GRADE!

YOUR SALES OPPORTUNITIES ARE GREATER

NO FELT BACKING... PLASTIC-ASBESTOS FROM TOP TO BOTTOM



Here's a top quality, new plastic flooring priced for the mass market. In standard gauge, its low price is comparable to grease-proof asphalt tile.

MATICO Aristoflex Plastic-Asbestos Tile Flooring requires no special cements, ordinary asphalt tile adhesives do the job. And you can cut standard gauge Aristoflex clean without use of a torch. It lays in tightly, immediately, because of square corners and clean edges. Installation is easy, fast for your crew or for the homeowner.

And you are assured of customer satisfaction, because Aristoflex has unusual "memory" for its original form—recovers quickly from indentations. And Aristoflex has the wearability of the most durable resilient flooring. It is tough, plastic-asbestos from top to bottom. The beautiful marbleization and vivid, sparkling colors go clear through each tile. And cleaning's a cinch. The smooth, non-porous surface sheds dirt, wipes clean with a damp mop.

Available in 9" x 9", standard gauge and ⅛" tiles. Wide variety of bright, clear, non-fading colors.

Meet the growing demand for plastic flooring with Aristoflex! Its superior qualities produce fast sales, easier installation, and satisfied customers. Write for details and FREE Aristoflex samples!

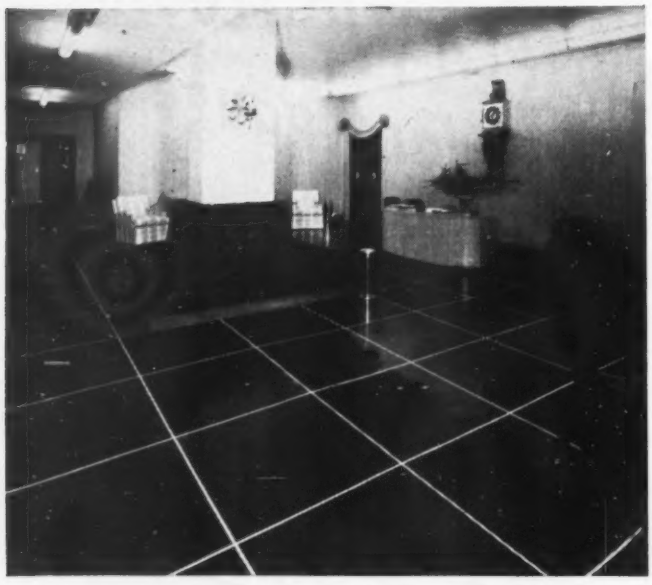
Dept. 34

MASTIC TILE CORPORATION OF AMERICA

Members Asphalt Tile Institute

Joliet, Ill. • Long Beach, Calif. • Newburgh, N. Y.

World's largest producer of asphalt tile



THE ABOVE attractive floor treatments are achieved with, (left) rubber tile, and (right) a linoleum tile. Both types insure long satisfactory service in homes as well as commercial buildings.

Types of Linoleum

Linoleum consists of a mix composed principally of ground cork, wood flour, oxidized linseed oil, color pigments and resins bonded to a felt or burlap backing by heat and pressure. Since colors and patterns extend through to the backing, they remain clear and sharp as long as the linoleum lasts. Five main types of linoleum—plain, jaspe, Marbelle, straight line inlaid, and embossed inlaid—are produced.

Plain linoleum, as the name indicates, is linoleum of a single color. Heavy gauge plain linoleum in the darker shades is known also as battleship linoleum.

Jaspe linoleum presents a two-toned or multi-toned striated appearance.

Marbelle linoleum, which is composed of several colors or several tones of the same color, can be recognized by its allover marble effect without other pattern.

Straight line inlaid linoleum consists of design units of plain or marbelized linoleum keyed by tremendous pressure to a fabric backing. It gets its name from the fact that the blocks of the pattern, which are usually of contrasting colors, are die-cut so that the lines between them are sharp and distinct.

Embossed inlaid linoleum has portions of the pattern depressed slightly so that blocks or other design elements seem to stand out in relief. It is formed by arranging the "mix" in the desired pattern with metal stencils and then solidifying this design by passing the material through a huge hydraulic press. Subtle color shadings not possible in other types of linoleum can be produced in this manner.

Thicknesses of Linoleum

Linoleum is offered in three general thicknesses: heavy gauge (approximately ⅛" thick), standard gauge (approximately 32" thick) and light gauge (approximately 1/16" thick). Specification of the various thicknesses should be dependent upon the requirements of the particular area to be covered. Commercial or heavy traffic areas are best floored with heavy gauge linoleum. In general, standard gauge linoleum should be specified for residential areas. For those desiring an economy grade floor covering, light gauge material is suitable.

Installation of Linoleum

While the installation of linoleum is the job of a trained mechanic, dealers selling the merchandise should have a knowledge of the product's installation specifications. A knowledge of the proper construction and preparation of underfloors to receive linoleum is essential.

The underfloor must be smooth and even. Wood floors should be of double construction brought up to a proper surface below the finished floor level. The lower boards of this double floor should be thoroughly face-nailed to the joists and laid diagonally over them. The top boards should be either (a) thoroughly dry and well-seasoned tongue and groove lumber not more than 3¼" wide, laid at right angles to the floor joists and toenailed with eight-penny steel-cut nails on 18" centers; or (b) ¼" plywood. The contact between the edges of the plywood should be snug and complete. The plywood should be nailed to the rough wood underfloor with cement-coated or resin-sized nails 1¼" long which should be spaced 5" on all edges and 8" through the body of the plywood in staggered rows.

On old wood floors, loose, defective or badly worn boards should be replaced and face-nailed. On old or new floors, any unevenness at butts or joints must be scraped or planed smooth and even. Where it is necessary to smooth the underfloor by the sanding method, the wood floor should be sealed after sanding with a thin coat of shellac or sealer.

No linoleum should be laid under any circumstances over any wood floor which is below grade, directly in contact with the ground, or over an unexcavated area unless proper ventilation is provided between the underfloor and the ground.

Concrete floors to receive linoleum should be broom-clean and satisfactorily dry. The surface should be a smooth, even, troweled finish. On standard construction the concrete slab should have a cement topping not less than 1½" thick and a mix no leaner than one-part Portland Cement and three-parts clean screened sand. Expansion joints which are cut through the top layer of the cement must be retroweled, furnishing an even top surface. On monolithic construction the concrete floor slab should be troweled to a smooth finish, free from high and low spots. On concrete floors where expansion joints have not been retroweled, they must be filled in by the linoleum contractor with non-shrinking plastic material, so that such joints will not show through the surface of the linoleum.

Installation of linoleum should not proceed until tests have been made to assure that the floors are satisfactorily dry. No linoleum should be laid over concrete which is below or on grade.

Section 11 Roofing, Shingles, Siding

Roofing

If any part of a building can be classed as most important for the part it plays in providing shelter, it certainly is the roof. Each type of roofing material has its limitations as well as its advantages. The selection of a proper material for covering a roof is not dependent entirely on its ability to provide protection against the burning sun, frigid blasts, snow, ice, wind, and rain. There are the matters of ease of application and maintenance, economy, permanence, and investment to be considered also.

Some materials, and even better grades of the same product, though the initial cost is higher, yield a far better return on the investment by affording longer life and increased protection from fire and weather. Then, too, we have come to identify certain roofing materials with specific types of architecture. Unusual climatic conditions, especially higher-than-normal wind areas, also have to be considered in a proper selection. The slope of the roof is a most important consideration.

How to pick the right type of material in relation to pitch of roof—

Flat roofs —Canvas decking and some types of metal roofing

Slope 1 in. to 1 ft.—Built-up roof of low melt point asphalt

Slope 2 in. to 1 ft.—Built-up roof of higher melt point asphalt

Slope 3 in. to 1 ft.—Any asphalt smooth or mineral surfaced roofing*

Slope 4 in. to 1 ft.—Thick-butt and hexagonal asphalt strip shingles
—Diamond Point asphalt roofing (Re-roofing only)
—Natural slate

Slope 5 in. to 1 ft.—Asbestos shingles†
—Individual asphalt shingles laid Dutch lap

Slope 6 in. to 1 ft.—16 in. red cedar shingles (Can be laid on a slope of 3 in. to 12 in. if laid with an exposure of 3¾ in.)

Even after the selection of the proper material for the roof, its serviceability and long life depend on the following fundamentals:

1) The correct size of the roof rafters. (See Lumber Section—Rafters)

2) The proper selection of roof sheathing and its correct application. (See Lumber Section — Roof Boards)

3) Proper ventilation of the attic space under the roof deck during construction.

It is also important that the attic space be properly ventilated to minimize condensation of moisture after the building is completed and in use. Frequently moisture vapors from the lower stories, rising to the attic will be chilled below its dew point and will condense out on the under side of the roof deck, causing the sheathing boards to warp and buckle sufficiently to disturb the lay of the roofing.

To avoid this, louvred openings should be constructed high up under the eaves in the gable ends or at such other locations as will insure adequate venting. Such louvers should have a total effective area equivalent to ¼ square inch for each square foot of attic floor space.

See Ventilation—Insulation Section

4) Proper application of the Materials on the roof. (General instruction on each kind of material will be found in this section. For specific instructions, consult Manufacturer's application sheets.

5) Proper Flashing.

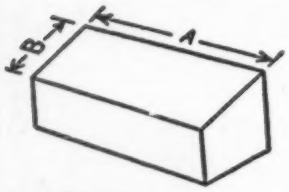
HOW TO FIGURE ROOF AREAS

Most all roof products are sold by the square, that is, enough material when laid according to the maker's instructions, to cover 100 square feet of surface. The number of squares required is determined by dividing the square foot area of a roof by 100.

*Some roofing manufacturers claim smooth surface roofing can be laid on slopes 2 in. to 1 ft.

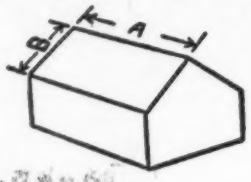
†One type of asbestos shingles can be laid on slopes of 4 in. to 1 ft.

Below are the methods of figuring simple roof areas:



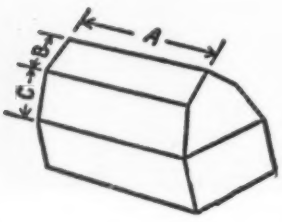
SHED ROOF

Length of roof (A) multiplied by slope of roof (B) gives the total roof area.



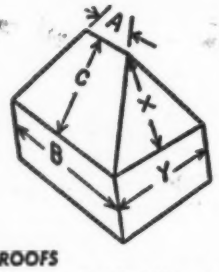
GABLE ROOFS

Figure one pitch same as for shed roofs—then multiply by two.



GAMBREL ROOFS

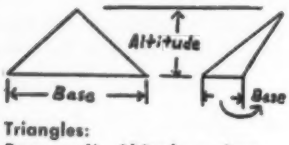
Add length of B and C to determine rafter length. Multiply the sum of these by length of the roof (A). Then multiply by two. The result is the total roof area.



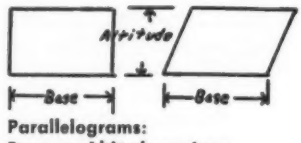
HIP ROOFS

Add length of ridge (A) to length of eave (B) and divide by two. Multiply this sum by slope (C). Multiply slope (X) on the triangle side, by length of short eave (Y). Divide the result by two. Add the two answers and multiply by two and the result is the total roof area.

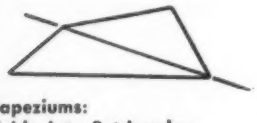
More complex roofs are figured by breaking the roof area up into convenient sections of rectangles, and triangles, and computing the area of each one separately and then adding their total.



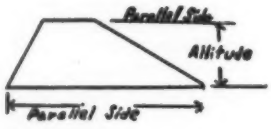
Triangles:
Base x ½ Altitude = Area



Parallelograms:
Base x Altitude = Area



Trapeziums:
Divide into 2 triangles and find the area of the triangles.



Trapezoids:
Altitude x ½ sum of Parallel sides = Area

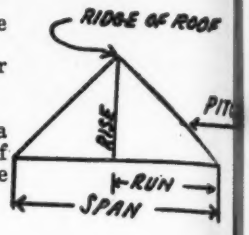
Circles:
Diameter x 3.1416 = Circumference
Circumference x .3183 = Diameter
Diameter² x .7854 = Area

Approximately the area of any roof, no matter how it may be cut, is determined as follows: Get the exact area of building, including horizontal projection of cornice and add to this the following percentages:

¼ Pitch	Add 12 Percent
⅓ Pitch	Add 20 percent
½ Pitch	Add 42 percent
⅜ Pitch	Add 25 percent
⅝ Pitch	Add 60 percent
¾ Pitch	Add 80 percent

For Illustration: Take a building 24 × 40, with one foot cornice and ⅓ pitch: 26 × 40 = 1092 square feet. 20 percent of 1092 = 218. 1092 plus 218 equals 1310 feet, the factual roof area. Add to this amount the cornice projection of dormers.

ROOF PITCHES



Span is the total width between the walls.

Rise is the height of the ridge or peak of a gable above the walls.

Run is ½ of the Span.

Pitch relates to the steepness of a roof. It stipulates the proportion of the rise to the span according to the following formula:

$$\text{Pitch} = \frac{\text{Rise}}{\text{Span}}$$

To illustrate, a span of 30′ and a rise of 10′ equals a 10/30 or 1/3 pitch. If a roof is ½ pitch and a building is 24′ wide, the ridge is 12′ above the walls, because ½ of the 24′ span equals 12′.

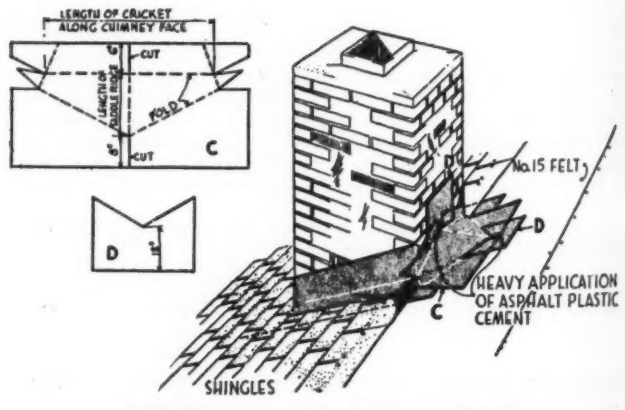
The rise per foot of run is always equal to the pitch fraction of 24″ because two 12″ runs equal a 24″ span; for example ¼ pitch = 6″ rise per foot of run, because ¼ of 24″ = 6″.

FLASHINGS

Because roofs are more often than not complicated by the intersection of other roofs, adjoining walls or projections through the deck, such as chimneys and soil stacks, all of which create opportunities for leakage, special provision must be made for turning the weather at these points. Such construction is commonly called "flashing."

In principle, wherever two elements of the structure join, flashing provides that water descending from the surface of the higher element will be conducted over the joint to the surface of the lower element. This is easier to express than to achieve. Careful attention to flashings is very essential to good roof performance, regardless of the type of construction or the cost thereof.

Valleys exist where two sloping roofs join at an angle causing run off toward the joint. Because drainage concentrates at the joint, it is especially vulnerable. A smooth unobstructed drainage way must be provided with enough capacity to carry away the water rapidly. A somewhat similar situation exists where the rake of a roof abuts a vertical wall.



***FLASHING** over cricket in rear of chimney.*

To avoid stresses and distortions due to uneven settling, chimneys are built on foundation wall footings or on separate foundations, and project through the house from cellar to roof without touching the framing at any point. Therefore, the flashing at the roof calls for construction which will allow for movement without damage to the water seal.

The drawings in this section illustrate typical applications of flashing, using asphalt roofing as well as metal for the flashing material. The correct application of flashing has an exceedingly important bearing on the successful performance of a roof.

There is not room here to discuss completely all of the various details that must be considered in the application of flashing. Instructions are available from manufactur-

RUBEROID REPORTER

NEWS OF INTEREST TO DEALERS • PUBLISHED BY The RUBEROID Company, 500 FIFTH AVE., NEW YORK 36, N. Y.

EVERY HIGH WIND BOOSTS SALES OF TITE-ONS A LITTLE HIGHER

Dealers report appreciative homeowners spread the word about Tite-On insurance

Every hurricane wind that hits brings further proof that Tite-On Shingles carry their own built-in wind insurance. Typical of reactions following each severe storm were the comments received after gales hit the North Atlantic States and Miami in the fall of 1950. Ruberoid received letters of admiration for Tite-On's staying power, from dealers, farmers and homeowners.

After a raging hurricane hit Waveland, Ala., a housewife wrote, "I want to express my great satisfaction with my Tite-On roof . . ." The picture of her home, at right, tells the rest of her story pretty well.

Thomas P. Coogan, former president of The National Home Builders Ass'n, said, ". . . We are extremely pleased with the shingles, not only as to their quality in withstanding our hurricanes, but also their ability to hold their original color."

An insurance agency in Illinois wrote, "As a result of the widespread windstorm . . . this agency had some 300 losses, with 90% of these losses resulting in damage to shingles. In making the adjustment it was brought to our attention that all buildings having Ruberoid Tite-On Shingles escaped the damage from this wind."

Here is graphic proof of Tite-On Shingles' wind insurance. When a raging hurricane struck Waveland, Ala., trees were uprooted and many houses destroyed, but this roof came through undamaged . . . a typical Tite-On case.

And so it goes! In case after case, when other types of roofs are giving way before the wind, Tite-Ons come through without the loss of a single shingle. It's no wonder that people are asking for Tite-Ons by name and that Tite-Ons are easier to sell than ever before.

Customers like Tite-Ons, not only for their windproof quality, but also because they add beauty, weather protection and fire-resistance. Tite-Ons patented self-locking feature produces an attractive basket-weave pattern, with deep shadows. And they're economical.

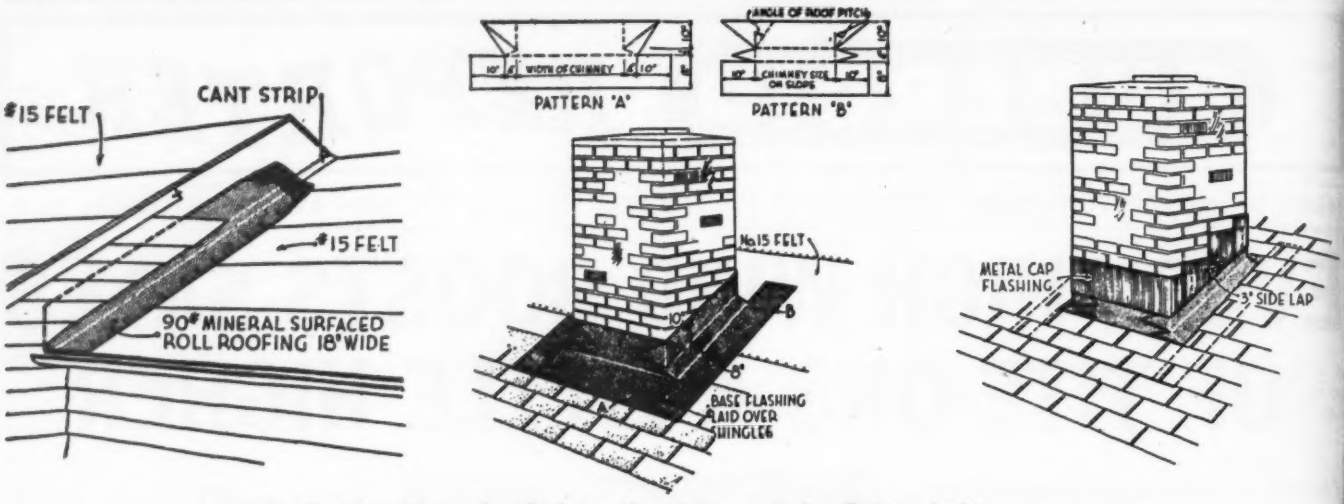
Tite-On Shingles are self-locking, as demonstrated here, yet they are anchored to the roof deck by four concealed nails.

Only Tite-On Shingles have earned the Good Housekeeping Seal of Approval.

The Power of the Post and Good Housekeeping Help You Sell Tite-Ons

Look for Ruberoid Tite-On ads in the April 12th issue of The Saturday Evening Post and the May issue of Good Housekeeping. Similar ads have already appeared in Farm Journal, Capper's Farmer, Successful Farming and Progressive Farmer. And there'll be more. See your Ruberoid Salesman about easel-backed display reprints of this ad and other sales aids.

Tite-Ons are applied with speed and ease. Mistakes are practically impossible. And only half as many nails are needed.



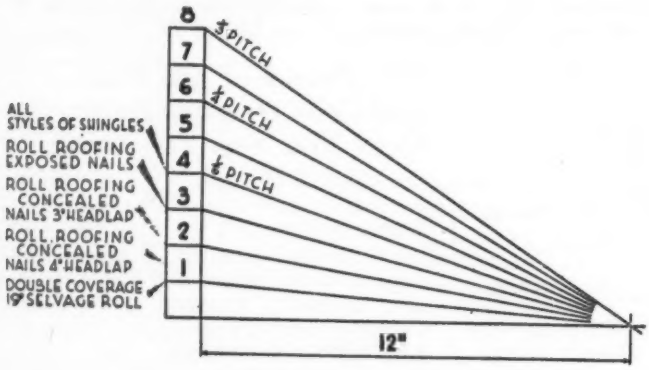
ASPHALT roll roofing, left, used to flash a roof against a vertical wall. Base flashing patterns, center, cut and applied. Metal cap flashing, right, applied to cover base flashing.

ers of asphalt roofing, the Asphalt Roofing Industry Bureau, 2 West 45th Street, New York 19, N. Y., and manufacturers of metal flashing materials. (See also Metal Products Section).

ASPHALT ROOFING

Asphalt roofing products are classified broadly into three groups: (1) saturated felts, (2) roll roofing (and roll siding) and (3) roofing (and siding) shingles. All are made from a base of dry felt. Depending on the desired finished product, the felt, previously processed from rag, wood and other cellulose fibers, is saturated and coated with asphalt and surfaced with selected mineral aggregates. These may be smooth roll roofings on which mica and talc are spread, or they may be so-called "mineral surfaced" products, such as slate-surfaced rolls or shingles.

Minimum pitch requirements

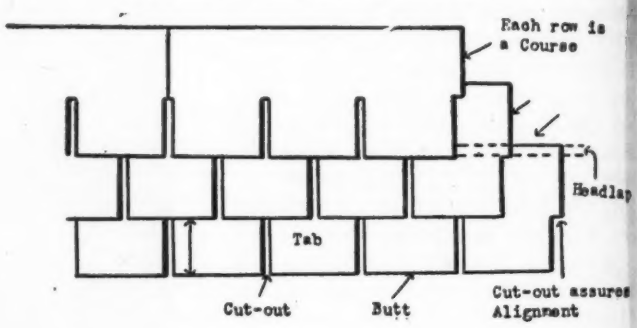


MINIMUM roof pitch requirements for different asphalt roofing products.

Any asphalt shingle can be used on roofs with slopes of 4-inch rise per horizontal foot or steeper. Wherever possible exposure should be minimized on the lower pitches, as this will increase the headlap and thereby provide better protection against water reaching the underlying deck by being forced up under the shingle by a driving rain or by accumulations of ice or snow in winter.

It is safest to use roll roofings on roofs with a pitch of more than 1 inch per foot. The lowest pitch recommended for roll roofing when the exposed nail method is used is 3-inch per foot. The concealed nail method of application, when providing a 3-inch headlap, can be used when the pitch is as low as 2 inches, and if a 4-inch lap is used the pitch may safely run as low as 1½ inch. The only roll product that is recommended as being suitable for a 1-inch pitch is the 19-inch double coverage roof, while only a properly specified built-up (laminated) roof should be used when the pitch is less than 1-inch per foot.

TYPES OF ASPHALT ROOFING



Asphalt Shingles

The wide variety of types of asphalt shingles can be divided roughly into two classifications; strip shingles and individual shingles. Strip shingles have as many as four tabs per strip; the tabs are either square or hexagonal in shape. Giant individual asphalt shingles are applied by either the American or the Dutch lap method. There are staple down individual hexagonal shingles which are fastened at the bottom by staples, and lock down individual hexagonal shingles, which are secured at the bottom by tabs projecting under adjacent shingles in the course below.

Asphalt shingles are produced in a variety of colors, including plain shades of green, red and black and blended shades of green, red, blue, brown grey and purple. Two kinds of surfaces are available—smooth and textured; the latter are textured to resemble the grain of wooden shingles.

Asphalt Roll Roofing

Roll roofing is made by adding a coating of a more viscous, weather-resistant asphalt to a felt which has first been impregnated with a saturant asphalt. Some roll roofings are surfaced with mineral granules to produce a wide range of colors. Some styles are furnished in split rolls designed to give an edge pattern when applied to the roof. Mineral-surfaced rolls are also embossed to simulate brick or stone for use as sidings.

Smooth roll roofing (without mineral surface but with mica or other surface) is produced in three common weights: 45-pound, 55-pound and 65-pound. The weights denote the weight of the roll. Years ago the different weights or thicknesses of the roofing were denoted as 1-ply (35-lb.) or light, 2-ply or medium, 3-ply or heavy and the 65-pound roll as extra heavy. Some customers still use these old terms.

Roll roofings are packaged to cover a roofing square (100 square feet). The extra 8 square feet provides for lapping in laying. The roofing is usually 3 feet wide and 36 feet long. All rolls contain galvanized nails and lap cement.

New — a colored shingle that will appeal to both builders and owners!

looks like split wood...
feels like stone

"Century" NU-GRAIN asbestos-cement siding...

"Century" No. 58 NU-GRAIN Asbestos-Cement Siding Shingles, NU-GRAIN Green. Other colors: NU-GRAIN Gray and NU-GRAIN Brown. 57 shingles per square, 1½" head lap.

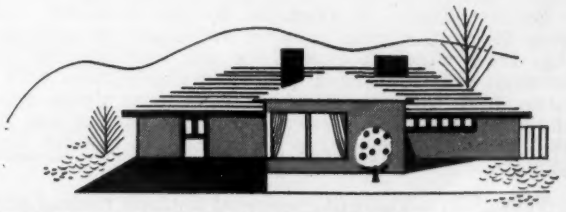
At last, for re-siding old homes and for new construction you can offer a colored shingle that has the architectural appeal of the old-fashioned split wood shingle . . . but the wearing qualities of stone itself.

For the new "Century" NU-GRAIN Asbestos Shingle duplicates exactly—in colored slate granules—the coarse and fine score marks of split wood.

These granules are permanently imbedded under hydraulic pressure, to make shingles in three colors that will not fade, NU-GRAIN Green, NU-GRAIN Gray, and NU-GRAIN Brown. And fire can't burn . . . rain can't soak . . . snow can't rot . . . and termites *hate* "Century" Asbestos Shingles!

You'll find the texture strong and visible with a straight butt shadow line so deep, it seems etched . . . the kind of texture builders and home owners want.

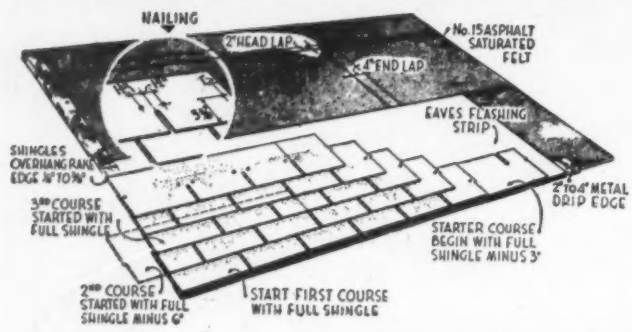
Whether your customer is buying for one home or a thousand, these shingles give him a low first cost, easy application, and higher sales appeal. That's why you can get new business and more business with "Century" NU-GRAIN Shingles. Write for details.



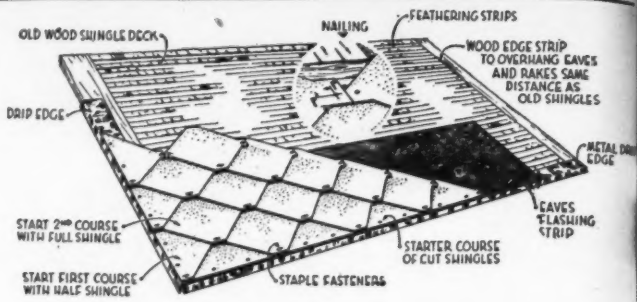
K&M best in asbestos®

America's first maker of Asbestos-Cement Shingles

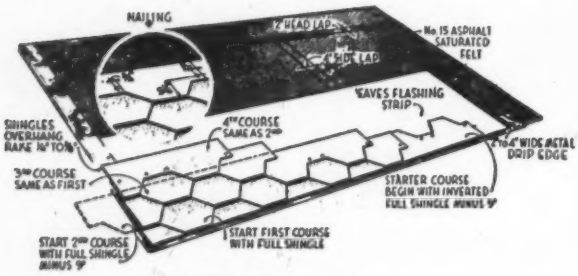
KEASBEY & MATTISON
COMPANY • AMBLER • PENNSYLVANIA


NAILING
2" HEAD LAP
No. 15 ASPHALT SATURATED FELT
4" END LAP
EAVES FLASHING STRIP
SHINGLES OVERHANG RAKE ⅜" TO ⅝"
3RD COURSE STARTED WITH FULL SHINGLE
2" TO 4" METAL DRIP EDGE
STARTER COURSE BEGIN WITH FULL SHINGLE MINUS 3"
2ND COURSE STARTED WITH FULL SHINGLE MINUS 6"
START FIRST COURSE WITH FULL SHINGLE

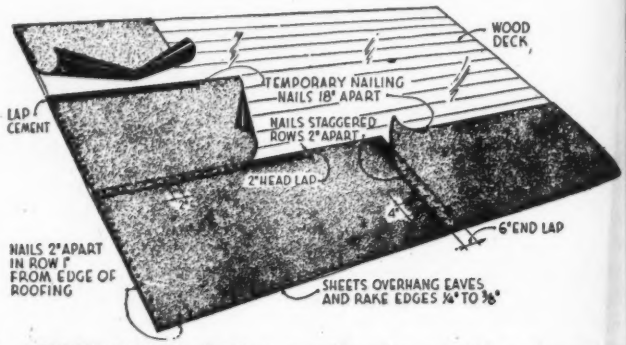
THREE TAB square butt strips. Cutouts are centered over the tabs in the course below.


OLD WOOD SHINGLE DECK
NAILING
FEATHERING STRIPS
WOOD EDGE STRIP TO OVERHANG EAVES AND RAKES SAME DISTANCE AS OLD SHINGLES
DRIP EDGE
METAL DRIP EDGE
START 2ND COURSE WITH FULL SHINGLE
EAVES FLASHING STRIP
STARTER COURSE OF CUT SHINGLES
START FIRST COURSE WITH HALF SHINGLE
STAPLE FASTENERS

INDIVIDUAL HEX shingles, staple down type, applied over old wood shingles.


NAILING
2" HEAD LAP
No. 15 ASPHALT SATURATED FELT
4" END LAP
EAVES FLASHING STRIP
SHINGLES OVERHANG RAKE ⅜" TO ⅝"
4TH COURSE SAME AS 2ND
2" TO 4" WIDE METAL DRIP EDGE
3RD COURSE SAME AS FIRST
STARTER COURSE BEGIN WITH INVERTED FULL SHINGLE MINUS 9"
START 2ND COURSE WITH FULL SHINGLE MINUS 9"
START FIRST COURSE WITH FULL SHINGLE

TWO TAB hex strips.


WOOD DECK
TEMPORARY NAILING NAILS 18" APART
LAP CEMENT
NAILS STAGGERED ROWS 2" APART
2" HEAD LAP
6" END LAP
NAILS 2" APART IN ROW 1" FROM EDGE OF ROOFING
SHEETS OVERHANG EAVES AND RAKE EDGES ⅜" TO ⅝"

EXPOSED NAIL application of roll roofing parallel to the eaves.

APPLICATION PROCEDURES FOR VARIOUS TYPES OF ASPHALT ROOFING

Mineral surfaced roll roofing is usually produced in 90 and 92-lb. rolls, three feet wide and 36 and 38 feet long. It is especially adaptable where color is desired in the finished roof as color mineral granules are embedded in the asphalt in the upper surface. This roofing is usually manufactured in two shades of red and green and one shade of black.

Mineral surfaced roofing is also made in three widths, 9-inch, 12-inch and 18-inch and packaged in rolls 36 feet long weighing 21, 28, and 42 pounds respectively. The 9-inch widths are used in starting shingle course (hence its name, Starter) and for covering hips and ridges. The 12-inch and 18-inch widths are used for lining valleys.

Split rolls with a diamond or other edge patterns are most commonly manufactured in 32-inch widths, 48-foot lengths and a 105-pound weight. Selvage edge mineral surface roofing is produced with a 19-inch selvage edge that leaves a 17-inch exposure of fire-resistant surface on each course. It is particularly useful on barns and other farm structures. Common weights are 130 and 140 pounds. It is packaged in 3-foot widths and 36-foot lengths.

ADVANTAGES OF ASPHALT ROOFING

Fire resistance—Asphalt roofing will resist the spread of fire due to flying brands. Its fire resistance is further increased through the application of non-flammable mineral granules, so that fire insurance premiums on buildings covered with asphalt roofing are relatively low.

Beauty—There is available to the consumer today a wide range of styles, textures and colors in asphalt roofings from which to choose the one best adapted both to personal preference and a harmonious relation with other elements in the structure. Color of roofs, doors, windows, shutters, trim and sidewalls can be harmonized by the skillful planner in such a manner as to achieve real distinction.

Versatility—The wide range of asphalt roofing products allows the choice of a type to meet practically every building need, be it a temporary structure, institutional construction or any of the many types of buildings that range between these extremes. This is true not only where new construction is involved but also for all kinds of re-roofing or maintenance work.

Economy—Asphalt roofing is low in first cost, requires no painting and staining to obtain desired color effect and is easily applied and maintained. Strategically-located manufacturing plants throughout the country facilitate distribution.

APPLICATION OF ASPHALT ROOFING

Reroofing—over old roofing

In most localities when a reroofing job is under consideration, a choice must be made between removing the old roofing or permitting it to remain. It is generally not necessary to remove old wood shingles, old asphalt shingles or old roll roofing before applying a new asphalt roof, provided a competent inspection indicates that:

(1) The strength of the existing deck and framing is adequate to support the weight of workers and additional new roofing, as well as the usual snow and wind loads.

(2) The existing deck is sound and will provide good anchorage for the nails used in applying the new roofing.

If such inspection indicates that old wood shingles may remain, the surface of the roof should be carefully prepared to receive the new roofing by:

(a) Removing all loose and protruding nails, and renailing in a new location.
(b) Nailing down all loose shingles.
(c) Splitting all badly curled or warped old shingles and nailing down the segments.
(d) Replacing missing shingles with new ones.
(e) When the work is being done in a location subject to the impact of unusually high winds, the shingles at eaves and rakes should be cut back far enough to allow the application at these points of 4-inch to 6-inch nominal 1-inch thick wood strips. Nail the strips firmly in place, allowing their outside edges to project beyond the edges of the deck the same distance as did the wood shingles.
(f) To provide a smooth deck to receive asphalt roofing it is further recommended that a backer board be applied over the wood shingles or that bevelled wood feathering strips be used along the butts of each course of old shingles.

The RICH- TRIPLETS bring rich PROFITS!

Richkraft

The many uses for reinforced papers, breather sheets and black papers mean a steady outlet that is worth pushing. Recommend them for use as vapor barriers, under siding, under roofing, under wood floors, over sub-fill, wherever it is desirable to keep moisture, wind and dust out. The Richkraft line is complete from the sturdy Skufpruf, a reinforced heavy-duty, plasticized, waterproof paper for the toughest jobs to black papers. No other line offers you so much. Roll widths range from 3 ft. to 10 ft.—a size for every customer's needs without waste or cutting.

Richflex

Here is a complete line of reflective insulation that permits you to offer just the right insulation for the problem at the right cost to the customer.

Richflex does a 4-way job. It keeps winter heat in—summer heat out—acts as a moisture barrier—acts as a cold air barrier. The special aluminum pigment used in Richflex turns back more than 75% of heat rays striking it.

Richflex comes in three grades:

A—coated both sides, edge string reinforced.

B—coated one side, edge string reinforced.

C—coated both sides but without reinforcement.

Richflex is the real answer to low-cost insulation.

Richbead

Here's the right angle for dry wall construction. Richbead brings the protection of metal to both exterior and interior corners for new and existing homes. It eliminates chewed up and banged up corners at doorways, arches, reveals and soffits. It covers cracks caused by settling in interior corners and gives them clean lines.

Richbead consists of a metal angle glued to joint tape and it can be installed by anyone. Richbead means a real saving in time because it does away with factory corners and permits the use of any piece of wallboard. It speeds cutting and fitting and reduces waste to a bare minimum and you can often show big savings by eliminating casings around doors and windows.

Richbead is easy to handle and comes in two sizes—1/2 and 5/8 inches—8 ft. lengths, 25 pieces to the box.

Here is a line that really moves—quality products that meet a big demand—complete for every problem of its kind that your customer may face. Richkraft means bigger profits and bigger volume. Send the coupon and get full details.

The Richkraft Company
228 North LaSalle Street, Chicago 1, Illinois

- ☐ Please send me full details on Richflex.
- ☐ Please send me full details on Richbead.
- ☐ Please send me full details on your line of reinforced and black sheathing papers.

Company Name_____

Address_____

City_____ Zone____ State_____

Signed_____

(2) If old asphalt shingles are to remain in place, nail down or cut away all loose, curled or lifted shingles; remove all loose and protruding nails; remove all badly worn edging strips and replace with new; and just before applying the new roofing, sweep the surface clear of all loose debris.

(3) When new asphalt roofing is to be laid over old roll roofings without removing the latter, proceed as follows to prepare the deck:

(a) Slit all buckles and nail segments down smoothly.

(b) Remove all loose and protruding nails.

(c) If some of the old roofing has been torn away leaving sections of the deck exposed, examine such areas to note any loose or pitchy knots and excessively resinous areas. Such defects should be covered with sheet metal patches made from galvanized iron, painted tin, zinc, or copper, having a thickness approximately equal to 26 gauge.

SIZE AND AMOUNT OF NAILS FOR TYPICAL ASPHALT ROOFING PRODUCTS

	Shingles per Square	Nails per Shingle	Nails per Square	Length of Nail	Pounds per Square	
					10½ ga. by 7/16" head	11 ga. by 7/16" hd.
Roll Roofing on new deck			252	1"	1.20	1.12
Roll Roofing over old roofing			252	1-3/4"	1.86	1.78
19" Selvage over old shingles			175	1-3/4"	1.08	1.04
Thickbutt New	80	6	480	1-1/4"	2.39	2.20
Thickbutt Re-roofing	80	6	480	1-3/4"	3.00	2.86
Hex Strip New	86	4	344	1-1/4"	1.71	1.60
Hex Strip Reroofing	86	4	344	1-3/4"	2.14	1.94
Giant American	226	2	452	1-1/4"	2.25	2.15
Giant Dutch Lap	113	2	226	1-3/4"	1.39	1.33
Individual Re-roofer	82	2	164	1-3/4"	1.01	0.98

Nails—Nailing is extremely important in applying both asphalt shingles and roll roofing. Galvanized roofing nails having a large head of at least ⅜-inch diameter and a shank long enough to penetrate to the under surface of the roof deck should be used. The number and size of nails differ with the product.

ASPHALT CEMENTS AND ROOF COATINGS

There are a number of liquid and plastic asphalt products that are used as adhesives in flashings and as coatings. Coatings may be either liquid bitumen with nothing added or they may have asbestos fibres added. Some are pure asphalts which have been thinned or "cut back" with a petroleum solvent such as naptha. Others are asphalt-water emulsions which can be thinned, if desired, with water. Emulsions must be stored where they will not freeze in cold weather; and they must be used at times when they will not be rained on for a period of 24 hours or more after application.

A good asphalt smooth surface roofing rarely wears out. It dries out. To assure long life, roll roofing should be coated every three or four years. Asphalt roof coating gives old roof a new rubberlike top surface that covers and seals all pits and cracks. It penetrates and resaturates dried out felt, and composition roofings. It gives them new life. On metal roofs it seals small rust holes and stops further rusting.

Asphalt Roof Coating

1 Gal. Tins (4 to case).
5 Gal. Pails.
Barrels (55 Gals.).

A thick black compound made from liquid asphalt, tempered to spread evenly and smoothly at temperatures above 60 degrees. It is used for resurfacing roofs that are still in fair condition. It is used for cap-sheeting old roofs and for new built-up roofs. It may be used as a foundation coating over cement walls.

Asphalt Fibre Coating

1 Gal. Tins.
5 Gal. Pails.
Barrels.

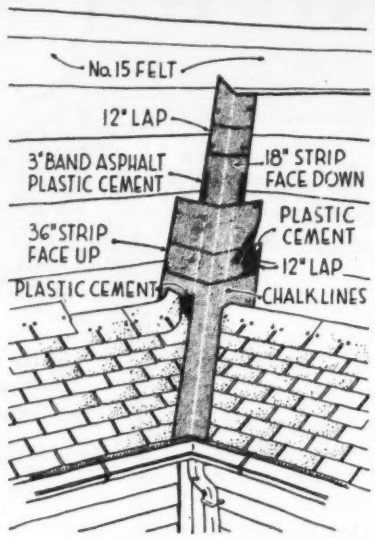


***ILLUSTRATION** shows method of valley flashing with asphalt roofing strip.*

To ordinary asphalt roof coating are added asbestos fibres to give it thickness and strength for recoating badly worn roof surfaces, which need an extra heavy coating.

Application: Both types of roof coating are applied directly to the roof with a brush, broom or spreader and are brushed out one way into a heavy even coat. No heat is required. Before applying the coating the roof should be thoroughly cleaned. Cracks, breaks and bad seams should be patched. Renail where paper is loose. Roof coatings can be used on all types of roofs except wood shingles.

Covering Capacity:

On metal roofs—per square—1 gallon.
Roofs in good condition—1 gallon per square.
On old composition roofs—1½ to 2 gallons per square.
On corrugated iron—1½ gallons per square.
On gravel roofs 3 to 5 gallons per square.

Lap Cement

1 Pint Cans.
1 Gal. Cans.
5 Gal. Cans.

The primary function of lap cement is to make a waterproof between the laps of roll roofing, to seal the edges and protect the nails. It is the contents of the little can that comes with every roll of roofing.

Plastic Cement

1 Pint.
1 Quart.
2 Quarts.
1 Gal.
5 Gals.

Plastic cement is a heavy blend of elastic asphalts containing preservative oils and asbestos fibres. It is used for flashings, for anchoring shingle tabs, for patching and repair work and many other purposes requiring a waterproof cement. It may be used for patching slate and metal roofs of all kinds as well as asphalt roofs. It is used for caulking boats, masonry foundation walls and coping.

Caulking Compound

1 Quart.
1 Gallon.
Cartridges.

An asphalt putty used to stop air leakage around window and door frames and to seal joints in the application of asbestos and manufactured brick sidings.

Foundation Coating

1 Gal. Tins.
5 Gal. Pails.

Used to waterproof the exterior of basement walls after ½" of cement mortar has been applied.

To Estimate: Unless surface is very rough, 12 gals. will cover 100 lin. ft., 5 ft. high.

STRI-COLOR...A SIDING WITH A New Kind of Beauty!

It Has Durable Beauty! Lovely Colors! Embossed Striated Surface Texture! ...and it's Protected with the Flintkote DURA-SHIELD* FINISH!

You never *saw* such beauty in a siding! You never *had* such a value to sell!

Wait until you *see* this FLINTKOTE STRI-COLOR* ASBESTOS-CEMENT SIDING!

In handsome gray, brown or green, STRI-COLOR Siding compares in warmth and richness with the most expensive of sidewall materials.

It is deeply striated by *embossing* . . . smart and distinctive.

And it sports that wonderful new finish you've been hearing about. The water-repellent, stain-resistant finish that's *exclusive* with Flintkote: DURA-SHIELD!

You can dramatically and convincingly demonstrate the advantages of DURA-SHIELD . . . *in two minutes flat!*

Alone . . . or in *combination* with other materials such as stone, stucco, brick, etc. . . . these sidings create unusual and delightful effects.

STRI-COLOR Sidings last a lifetime. They are made of materials that are *permanent* . . . materials that won't rot, won't burn, won't deteriorate.

And they will *outsell* ANY Asbestos-Cement sidings . . . both for new construction and for re-siding applications.

Get your order in today.

THE FLINTKOTE COMPANY, *Building Materials Division,* 30 Rockefeller Plaza, New York 20, N. Y.

*A Trademark of The Flintkote Company

FLINTKOTE

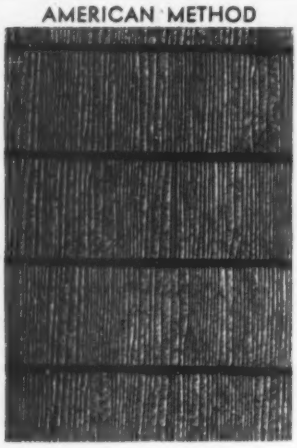
... the extra years of service cost no more!

FLINTKOTE BUILDING MATERIALS

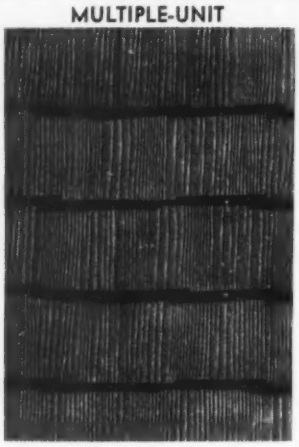
**Note these deep, beautiful striations, reproduced in actual size. Besides the gray siding shown here, STRI-COLOR is presently available in lustrous brown and green.*

ASBESTOS SHINGLES—Types and Sizes

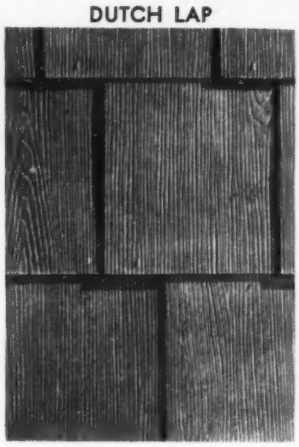
AMERICAN METHOD



MULTIPLE-UNIT



DUTCH LAP



HEXAGONAL

Type	Size	Weather Exposure	Headlap	Sidelap	Weight (Lbs. per square)	Shingles per square	Nails per square
AMERICAN METHOD	(Frequently made in strips—variable with manufacturers)						
HEXAGONAL	16"x16"	13"x13"	3"	3"	240-260	86	1.75 lb.
DUTCH LAP	16"x16"	(1/4-lap) 13"x12"	(1/4-lap) 3"	(1/4-lap) 4"	265-290	92	1.50 lb.
		(1/3-lap) 13"x10-2/3"	(1/3-lap) 3"	(1/3-lap) 5-1/3"	345-370	104	1.00 lb.

Note: All types made in gray, blue-black, red and green by most manufacturers. Hexagonal made with smooth surfaces; others usually with wood grain texture.

Shingles

ASBESTOS CEMENT SHINGLES

Asbestos cement shingles, like other asbestos cement building products, are made of a combination of asbestos fibers and portland cement, formed under great hydraulic pressure. They are fireproof and durable and will last indefinitely unless broken by impact.

Asbestos shingles are equally adapted for use on new buildings or for application over old roofs. Usually the new shingles can be applied right over the old roof, thus saving the cost of removing the old shingles and giving the roof the added insulation value of the old roofing.

Asbestos cement shingles are sold by the square, which means sufficient shingles to cover 100 square feet of surface when applied according to the manufacturer's directions.

Characteristics of Asbestos Cement Shingles

The principal selling points for all four types of asbestos cement shingles are their permanence, fire protection and freedom from maintenance expense.

Fire Protection—Asbestos cement shingles are absolutely fireproof. They contain nothing that will burn. This means lasting protection against the menace of roof-communicated fires.

Permanence—Made of two practically imperishable materials, asbestos and cement, asbestos shingles are immune to rot and decay. They are unaffected by ice, snow, rain or exposure to salt air. They can be expected to last as long as the building to which they are applied.

Low Maintenance Cost—Since asbestos shingles are not affected by any of the usual causes of wear, they do not have to be replaced. That means there are no expensive repairs nor any periodic upkeep expense.

Beauty—The thick butts of asbestos shingles provide clean-cut shadow lines that give the roof interest and charm. The texture and grain of fine weathered wood is reproduced in the surface treatment. In addition, the attractiveness of the shingles is enhanced by a variety of colors, ranging from rich reds and striking greens to cool grays and whites.

APPLYING ASBESTOS CEMENT SHINGLES

Asbestos shingles should not be applied on a wet or damp roof deck. When a job is left partially completed, felt should be laid over the upper applied course of shingles to prevent rain from running down underneath the shingles.

Extra care should be taken in extreme winter weather at lower portions of roofs against leaks caused by ice and snow "backing up" from gutters.

Asbestos Cement Shingle Accessories

Eave Starters, Ridge and Hip Shingles, Ridge Rolls—These items are made especially to simplify the application of asbestos cement shingles. They are purchased separately.

Roofing Felts—Felts saturated with asphalt or tar are often used to cover new roof decks before asbestos shingles are laid. The asphalt-saturated felt comes in a three-square roll; tar-saturated in four-square rolls. Both are 32 inches wide.

Nails—Galvanized needle-point nails are recommended. For new roofs use 1¼-inch nails. When reroofing over old shingles used 2-inch nails.

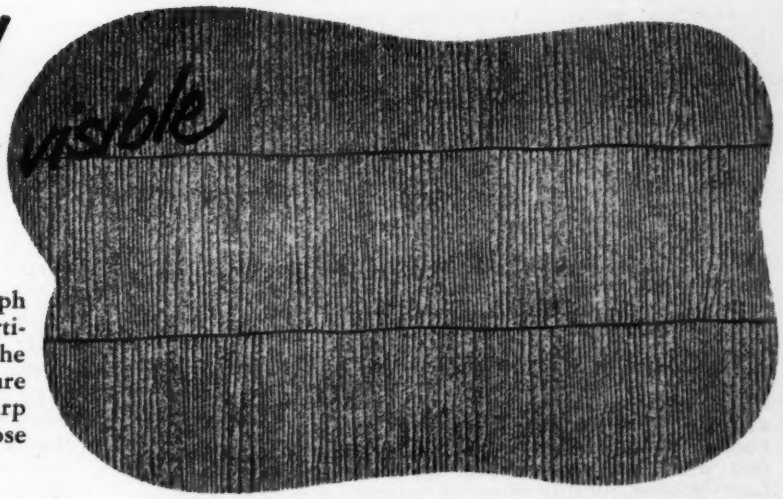
In Beautiful Colors...

Johns-Manville *Smoothgrain* Asbestos Siding

Smooth surface... yet beautifully grained

The surface of this new siding shingle is smooth, not grooved, but from any angle you'll see a richly colored, deep-grained texture that's built right into the shingle with permanent ceramic granules. Because the surface is smooth, Johns-Manville Smoothgrain Asbestos Siding resists soiling; and because it *looks* grooved, they are architecturally attractive. Available in a wide variety of *Permatone* colors including Heather Green, Autumn Brown, Weathered Gray, Silver Gray and White.

Nail heads and joints are hardly visible



In this unretouched photograph there are 18 exposed nail heads and 8 vertical joints but you can hardly see them. The nail heads are lost in the color blended texture and because the edges are cut so clean and sharp each shingle blends harmoniously with those adjoining.

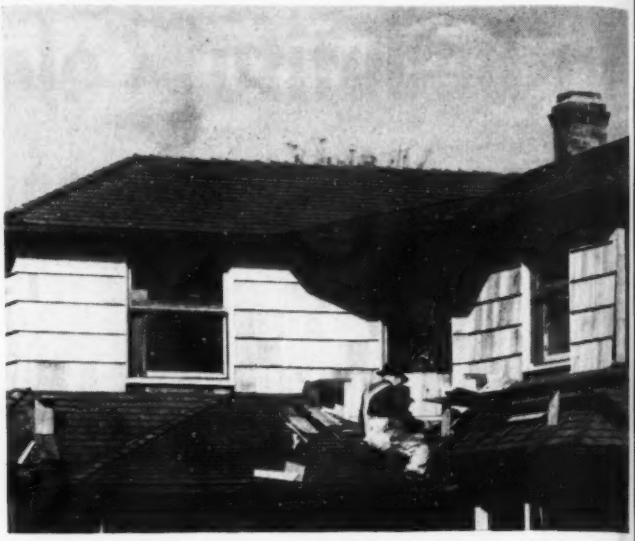
Faster, better installation

Because of the smooth surface and uniform thickness, Smoothgrain Shingles are easier to cut, have cleaner edges . . . there's no chipping to cause spoilage or mar appearance. Fireproof, rotproof, and weatherproof, Smoothgrain Asbestos Siding never needs preservative treatment. Applied right over existing sidewalls, it restyles the oldest house and makes it look "new."

For a full-color brochure on Smoothgrain, write Johns-Manville, Box 290, New York 16, N. Y. In Canada, write 199 Bay Street, Toronto 1, Ontario.

JOHNS-MANVILLE JM PRODUCTS

Johns-Manville



WOOD SHINGLES have maintained widespread popularity both for roofing and siding. They may be applied either on new or existing structures, single or double course. Shingles are supplied plain or factory stained in a number of pleasing colors. They may also be tinted after they are applied.

WOOD SHINGLES

(Western Red Cedar)

Most of the wood shingles used at the present time for roofs and sidewalls of buildings are of Western red cedar. Redwood, bald cypress and Eastern white cedar find use to a smaller extent. The heartwood of these species is resistant to decay.

Edge-grain shingles are much better than flat-grain shingles because they warp much less and withstand weathering better. Commercial western red cedar, cypress and redwood shingles of the No. 1 grade promulgated by the U. S. Department of Commerce are all heartwood and all edge-grain. For lasting service, the singles should be properly laid and nailed with corrosion-resistant nails. The thickest standard-grade shingles (4/2) have butts ½-inch thick and will last longer and give better service than those with butts 0.4 inch (5/2) or 0.45 inch (5/2-¼) thick.

Roofs are more severely exposed to weathering and decay than are walls. Only the No. 1 grade shingles are ordinarily recommended for roofs of permanent buildings. Shingles of lower grade may be suitable for side walls.

Sizes and Grades

Most shingles are manufactured in random widths with 14 inches the maximum in all grades. Three standard lengths are recognized—16, 18, and 24 inches. Shingles are packed in bundles, four of which contain a sufficient number of shingles to cover an area of one hundred square feet when properly applied. A roof square consists of four bundles, but to cover a square on a side wall by single coursing, only three are required.

16 Inch Shingles—5 butts to 2 inches—Shingles 16 inches long, the smallest size, must be so thick that five shingles, when measured across the butts (or thickest portion) when green must measure two full inches.

No 1—16"—5/2" (Number one, sixteen inch, five [shingles] to two [inches]) shingles, also called "Five X" (written XXXXX) represent the best, or premium grade that is manufactured in this length and thickness. These extra fine shingles are intended primarily for roof construction, where the shingles should lie flat and tight and where there must be complete protection from rain-water driven by high winds.

They show, therefore, a minimum tendency to expand and contract with changes in moisture content, and they are highly resistant to splitting. No knots of any kind are permitted, and they must consist entirely of heartwood. No shingles narrower than 3 inches are permitted.

These shingles are of a superior grade for side walls on fine houses. On steep roofs (one-third pitch or steeper) they can be expected to have a life of more than thirty-five years under average climatic conditions; on one-fourth pitch roofs a life of at least 25 years can be anticipated. On side walls they will have an indefinite life usually greater than the useful life of the structure.

No. 2—Make good roofs for secondary buildings, as well as excellent side walls, and offer good service for over-roofing over old wood shingles. Are 12-inch clear from the butt.

No. 3—16-inch—5/2 shingles are suitable for uses where economy is the greatest factor, but when properly applied they will give good service. They can be used as under courses in side walls. These shingles must be clear for the bottom half of their length.

18 Inch Shingles—5 butts to 2¼ inches—No. 1—Are considerably thicker at the butt than 16-inch shingles, and are intended for use on the finest types of structures. With a long exposure and double-coursing with No. 2s or 3s of the same size, heavy shadow lines almost half an inch deep are obtained, making possible beautiful architectural effects. All clear, edge grain and all heartwood.

No. 2—Are not intended primarily for roofs, but they will give excellent service on secondary buildings such as larger barns, implement sheds and other farm structures. They are excellent for use on side walls. Are clear of knots 12-inch from butt.

No. 3—Are ideal for under-coursing and represent an economy grade that can be used for side walls.

24 Inch Shingles—4 butts to 2 inch—No. 1—With these much wider exposures are permissible. With double-coursing, using No. 2s or 3s for the under coursing, shadow lines a full inch in depth are obtained. No. 1's are of course strictly edge-grain, all heartwood and clear. No. 2's permit mixed grain and must be 16 inches clear or better and No. 3's must be 10 inches clear and better. Consult the grading rules for a complete description of each grade. All 24-inch shingles are packed with 13 courses in one end of the bundle, and 14 courses in the other.

APPLICATION OF WOOD SHINGLES

The first course of shingles at the eaves should be at least doubled, as the obvious minimum requirement of good practice. All shingles when laid on the roof should be spaced apart at least ¼ inch, and only two nails should be used for each shingle. The proper placing of these two nails is an important matter. They should be near the butt line of the shingles in the next course that is to be applied over the course that is being nailed, but should never be driven below this line so that they will be exposed to the weather. One to 1½ inches above the butt line is good practice, with 2 inches above as an allowable maximum. Furthermore, each nail should be placed not more than ¾ inch from the edge of the shingle at each side. When nailed in this manner, the shingles will lie flat and will give maximum service. To repeat: regardless of the width of the shingle, only two nails should be used. Never drive nails into the wood, crushing it. Hold that last blow!

Sure—CEDAR SHINGLES can cut sheathing costs in half! . . .

You may be paying more than you think, for "inexpensive" roofing. Don't fail to figure the cost of sheathing when estimating roofing expense. Certigrade cedar shingles, because of their great strength and rigidity, require only half the sheathing that you must use on ordinary roofing.

Yes, spaced sheathing costs about half as much as solid sheathing, and it also costs much less to apply! You can count on saving about $200 on sheathing and its application when you roof the typical 1952 house with cedar shingles. Normally, you will find that this saving more than makes up for the difference in cost of genuine cedar over substitute roofing.

Sharpen your pencil. Figure it out for yourself. Figure the comparative costs of *cedar shingles with spaced sheathing* as against *substitute roofing with solid sheathing*. We'll be glad to send you a handy estimating form which includes all of the cost factors in building a new roof.

FAST-SELLING CEDAR ROOFS COST FAR LESS THAN YOU'D GUESS

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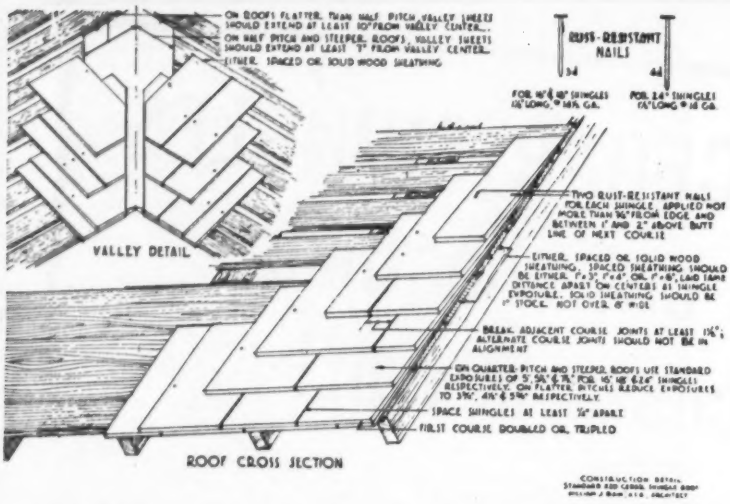
METROPOLITAN BUILDING
VANCOUVER, B. C., CANADA

CERTIGRADE
RED CEDAR SHINGLES


VALLEY DETAIL
ROOF CROSS SECTION
RUST-RESISTANT NAILS
TWO RUST-RESISTANT NAILS FOR EACH SHINGLE, APPLIED NOT MORE THAN 3/4" FROM EDGE AND BETWEEN 1" AND 2" ABOVE BUTT LINE OF NEXT COURSE
BREAK ADJACENT COURSE JOINTS AT LEAST 1 1/2"; ALTERNATE COURSE JOINTS SHOULD NOT BE IN ALIGNMENT
SPACE SHINGLES AT LEAST 1/4" APART
FIRST COURSE DOUBLED OR TRIPLED

THE ABOVE drawings show the application of wood shingles on roofs in new construction.

Proper Side Lap Is Imperative

The second layer of shingles in the first course should be nailed over the first layer in such a way that the joints in each course are not less than 1½ inches apart. This is the minimum "side lap" that is allowable, and if possible the joints should be "broken" by a greater margin.

Over-Roofing

The best and most practical method of re-roofing is to apply the new shingles directly over the old ones—a process known as Over-Roofing. In this way a double roof is obtained which tests have proven is actually stronger than the old single roof and which provides double insulation against heat or cold transmission. Over-Roofing assures protection of the contents of the building during application—sudden storms hold no menace. The customary muss or litter on lawns and shrubs is avoided.

There are just a few simple steps involved in Over-Roofing. First, cut away and remove the old shingles for 3 or 4 inches along the eaves and along the gable edges. The shingles thus removed should be replaced with strips of lumber nailed flush with the eaves and gable edges. These strips should be of the same thickness as the old roof. The old valleys should be partially filled with other lumber strips and new valley flashings laid down. Along each side of the ridges there should be nailed a strip of bevel siding, with the thin edge down.

When these steps have been taken, the new shingles should be applied just as on a new roof, using 5-penny nails for 16-inch and 18-inch shingles, and 6-penny nails for 24-inch shingles. If the sheathing boards under the old shingles are spaced apart, there is no necessity of making sure that the nails for the new shingles strike these boards because a sufficient number will reach the sheathing to hold the new roof firmly and securely in place. And when the job is completed, it will be next to impossible to discern whether it is a new roof or a repaired one.

Nails

Do not use bright or blue steel nails in applying wood shingles. Galvanized nails should be used and preferably hot-dipped zinc coated nails. A wood shingle lasts only as long as the nail that holds it in place.

Stained Shingles

Commercial wood shingles can be purchased already stained, or they can be bought unstained and stained on the job. The commercially stained shingles have the advantage of convenience and may prove to be more uniformly and durably stained. At times requirements of availability, grade of shingles, special color, or price may make it desirable to buy unstained shingles and stain them on the job. Staining on the job is done to best advantage by dipping the shingles one by one to at least two-thirds of their length in the shingle stain and standing them up nearly vertically to drain and dry. It is also practicable, as far as decorative effect is concerned, to apply stains by brush or spray gun after the shingles are laid.

COVERING CAPACITIES OF SHINGLES

Exposure Inches	Sixteen-inch Shingles 4-Bundle Square	Eighteen-inch Shingles 4-Bundle Square	Twenty-four-inch Shingles 4-Bundle Square
3½	70	...	...
4	80	70	...
4½	90	80	...
5	**100***	90	...
5½	110	**100***	...
6	120	108	80
6½	130	117	90
7	140	127	95
7½	**†150**	136	**100***
8	*160*	145	106
8½	*170*	**†154**	113
9	*180*	*163*	120
9½	*190*	*172*	127
10	*200*	*181*	**†133**
10½	*210*	*190*	*140*
11	*220*	*200*	*147*
11½	*230*	*209*	*153*
12	**‡240**	*218*	*160*
12½	...	*227*	*166*
13	...	*236*	*172*
13½	...	*245*	*180*
14	...	**‡254**	*186*
14½	...	...	*192*
15	...	...	*200*
15½	...	...	*206*
16	...	...	**‡212**
16½	...	...	...
17	...	...	...
18	...	...	...

* Maximum exposure recommended for roofs.

† Maximum exposure recommended for single-coursing on side walls.

‡ Maximum exposure recommended for double coursing on side walls.

Figures in italics are inserted for convenience in estimating amount of shingles needed for wide exposures in double-coursing, with butt-nailing. In double-coursing, with any exposure chosen, the figures indicate the quantity of shingles for the outer courses. Order in equivalent number of squares or bundles of No. 2 or No. 3 shingles for the concealed courses.

SHINGLES AND NAILS REQUIRED FOR OVER-ROOFING
(100 square feet roof area)

	Bundles	Size Nails	Pounds Required
16 inch shingles, 5" exposure	4	5d(1¾")	3½ lbs.
18 inch shingles, 5½" exposure	4	5d(1¾")	3½ lbs.
24 inch shingles, 7½" exposure	4	6d(2" long)	3 lbs.

SHINGLES AND NAILS REQUIRED FOR DOUBLE COURSING
(100 sq. ft. wall area)

	Bundles	Size Nails	Pounds Required
No. 1 16" shingles, 12" exposure	1⅔	5d*(1¾")	1⅛ lbs.
No. 2 16" shingles, undercourse	1⅓	3d (1¼")	⅝ lb.
No. 1 18" shingles, 14" exposure	1½	5d*(1¾")	1 lb.
No. 2 18" shingles, undercourse	1½	3d (1¼")	½ lb.
No. 1 24" shingles, 18" exposure	1⅞	5d*(1¾")	⅝ lb.
No. 2 24" shingles, undercourse	1⅞	3d (1¼")	⅝ lb.

*Small heads

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"AN ASSURED SUCCESS"

"SETS THE STAGE FOR GREATER DEALER PROFITS"

Dealers everywhere are applauding this dramatic new plan that makes stained red cedar sidewall shakes a practical, profitable dealer stock item.

Step up for *your* ticket to greater stained shake sales. Stock Creo-Dipt Pryme-Shakes factory stained in *one prime color.*

With your purchase you'll receive certificates redeemable in Creo-Dipt Fynal-Kolor, a new finish coat stain made specifically for use on Pryme-Shakes.

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Gentlemen:

Please send me at once complete information on the profitable, new Creo-Dipt Optional Kolor Plan, together with the name of my nearest Creo-Dipt Distributor.

FIRM NAME _____

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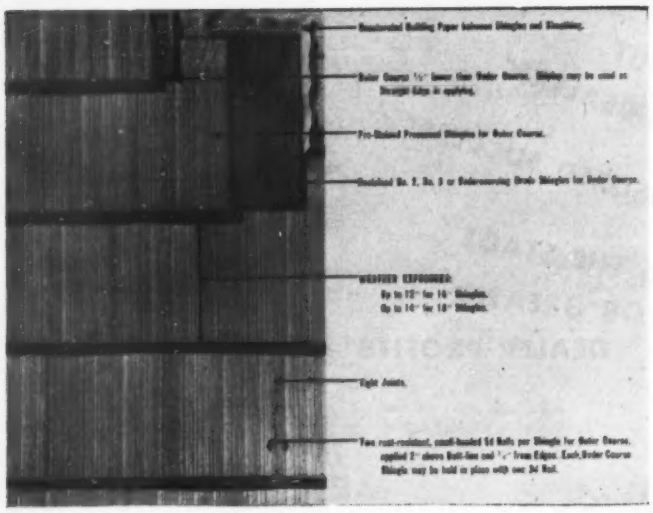


CONSTRUCTION detail of a double-coursed sidewall, machine-processed shingles applied over an under-course of unstained lower-grade shingles.

Siding

WOOD SHINGLES AND SHAKE SIDING

Wood shingles and shakes are a popular and practical form of wall covering.

First and second grade shingles may be used for side walls when single courses are used and third grade shingles are used for the undercourse when double courses are on sidewalls.

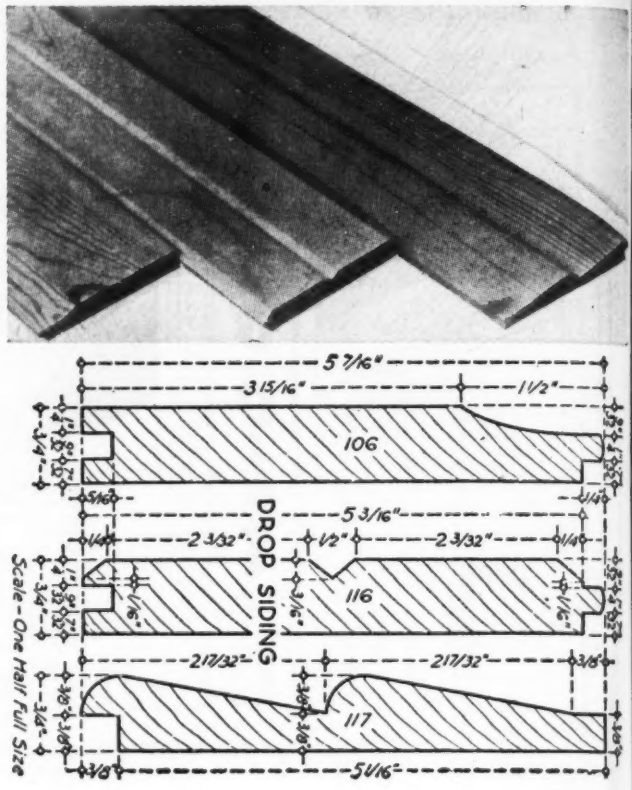
The weather exposure of shingles in single courses should never be greater than half the length of a shingle, minus ½ inch, so that two layers of shingles will be found at every point of the wall. So, on single coursing, the maximum exposure to the weather for 16 inch shingles is 7½ inches, for 18 inch shingles 8½ inches and for 24 inch shingles 11½ inches.

Shingles on sidewalls are most often laid in what is known as the "double-coursed" method of application. This is done by using two layers of shingles on each course—usually a first-grade shingle or shake applied over an inside layer of low-grade shingles. The exposed shingle or shake completely conceals the inside course, and is laid so that its butt extends about ½ inch below the inner shingle to provide an effective drip-cap. Exposures of 12 inches to the weather are standard for 16-inch shingles laid double-coursed, 14 inches for 18-inch shingles, and 16 inches for 24-inch shingles. These wide exposures permit increased coverage, thereby reducing the amount of shingles needed to cover a given area. Another factor contributing to the economy of double-coursing is the use of a low-grade shingle for the inside and completely concealed course.

Gaining rapidly in popularity for double-coursed sidewall construction are shingles which have been re-manufactured into processed shakes. These shakes are attractively grooved on one surface, and have precisely paralleled edges. They are laid with tightly fitting edges, thereby almost completely eliminating the joints between the shakes, which often characterizes shingle sidewalls These processed shakes are marketed largely factory-stained, being available in a wide variety of attractive hues.

Sidewall shingles may be left unstained, may be stained or painted after application, or may be applied pre-stained as received from the factory. A good shingle stain should be quite thin so that it can be applied evenly and quickly and should be put on when the shingles are thoroughly dry. To secure the most satisfactory paint job, use pure white lead and oil or the highest grade of mixed paint.

In new sidewall construction both tight sheathing and spaced sheathing are used. However, spaced sheathing is used only in mild climates. Wooden sheathing should be used to give proper nailing. However, if insulating sheathing or gypsum sheathing is used, nailing strips, spaced



NO. 106 NO. 116 NO. 117

the same distance as the weather exposure of the shingles, should be provided to give proper nailing.

Unsaturated building paper should be placed over the sheathing and under the shingles.

In applying the shingles, the butt lines or "shadow lines" should be even with the upper lines of the window openings and also, whenever possible, with the lower lines of such openings. When single coursed only two nails, each about ¾ inch from each edge should be used on each shingle. They should not be driven below the surface and are usually placed so as to be covered by the next course of shingles. Three-penny nails are used on 16 inch and 18 inch shingles and longer nails for shingles of greater thickness or lengths.

When shingles are applied in double-coursing, they are butt-nailed with five-penny, small heads, rust-resisting or zinc coated nails. Two nails should be driven into each top course shingle, approximately ¾ inch from the edges of the shingle. Use a third nail in the center of all shingles wider than 8". Apply all nails in a horizontal line, about 2" above the butts. Each under-course shingle may be held in place with a single three-penny nail.

The bottom course or row of sidewall shingles should be of double thickness and at least 6 inches from the ground.

On remodeling work shingles may be used to recover old sidewalls of other materials. They are simply nailed on over old siding. Brick walls are easily covered by furring the walls with 1 x 3 or 1 x 4 strips spaced the same distance as the weather exposure of the shingles. The nailing strips must be firmly fastened to the brick wall by means of anchors or special nails for this purpose. A wrought iron nail may be nailed into the mortar joint.

In applying over cracked stucco walls, the nailing strips should be attached with nails long enough to penetrate the stucco and the underlying sheathing. It is not desirable practice to apply shingles directly to the old stucco.

When over-walling around windows and doors, if the old ceilings are thinner than the new wall, moulding strips should be nailed flush with the edges of the old casings to which the shingles should be joined.

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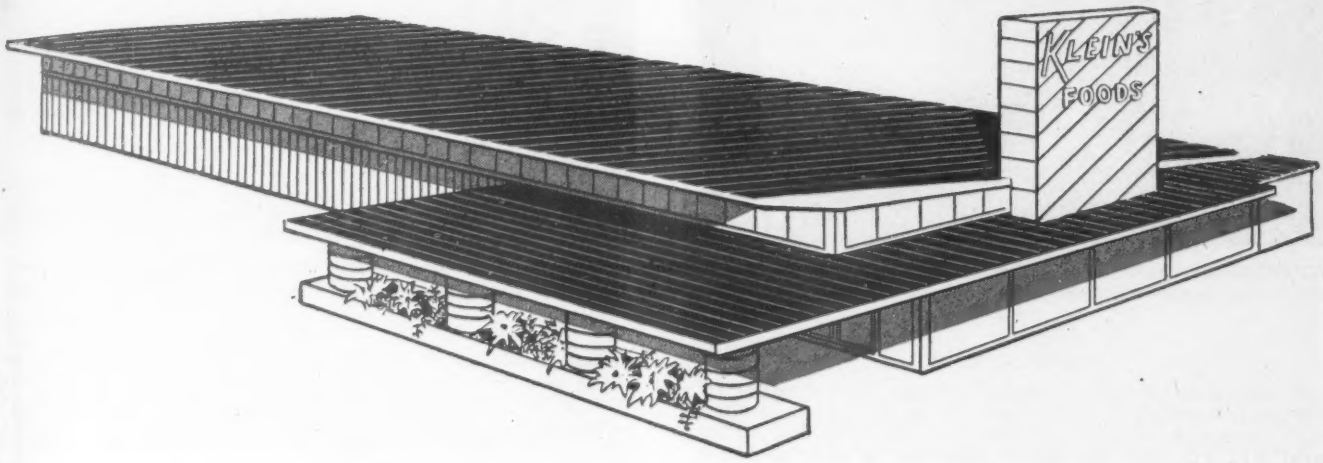
A ROOF THAT'S A CEILING, TOO!



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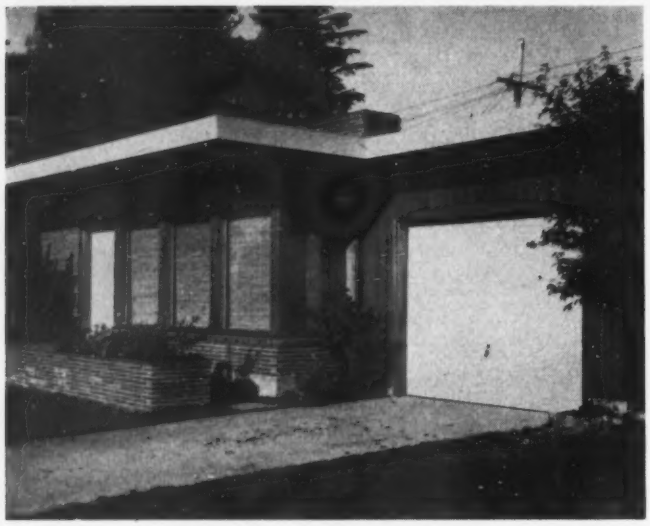
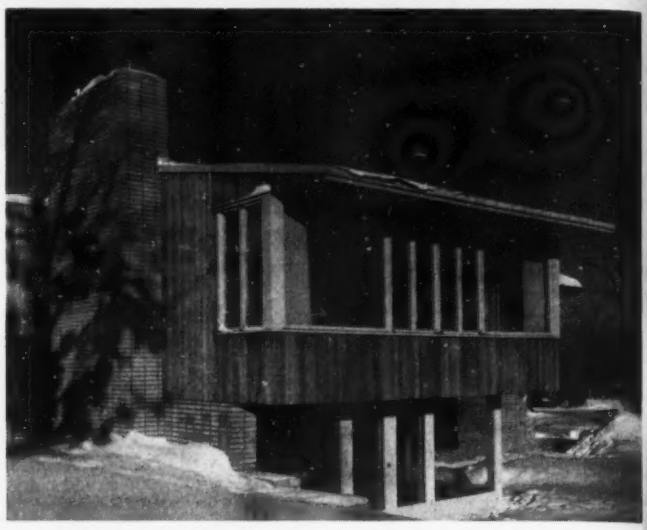




WOOD SIDING, supplied in a variety of styles and patterns, is a versatile material for the outside finish of homes and farm buildings. It permits a wide latitude of design from established practices, as witnessed by the ranch type home using center matched siding applied vertically.

WOOD SIDING

Wood siding is one of the oldest and most popular of side-wall coverings. It is economical to apply, adapts itself to almost any type of architecture, combines structural strength with insulation qualities, is easy to apply and remodels easily, and gives a wide latitude in the selection of surface and trim colors.

Siding is made from those soft woods that stand up under the conditions of outside exposure. Red Cedar, Cypress, White Pine and Redwood make good sidings. Fir and Yellow Pine are also used to make drop siding.

Types of Wood Siding

Bevel siding, or lap siding as it is sometimes called, is the most popular type of siding used in house construction. Standard widths are 4, 5, 6, 8, 10 and 12 inches. The 8 inches and wider is often called "bungalow" or wide Colonial siding. Bevel siding is manufactured by "resawing" dry, square-edged surfaced boards diagonally to produce two wedge-shaped pieces. The pieces are usually 3/16 inch on the thin edge and ½ to ¾ inch thick on the other edge, depending on the width of the siding. This method of manufacture gives one planed face suitable for painting and a sawed face which is rough and may be stained for effect.

Clapboards are square-edged boards lapped like bevel siding.

Drop siding and Rustic siding are usually ¾ inch thick and 6 inches wide. They are machined to a wide variety of patterns. Drop siding has tongue and groove joints while rustic has shiplapped joints. Drop siding is heavier, has more structural strength, and because of its design has tighter joints. For this reason it is most frequently employed on farm buildings, garages and other buildings where it is employed without sub-sheathing or wood and is nailed directly to the wood building.

Vertical Siding usually consists of matched boards 8, 10 or 12 inches wide, or of random width, the joints of which may be shiplapped and moulded, matched with V joint or covered with battens.

Flush siding is dressed and matched boards laid "flush" against the sheathing.

Various types of unusual siding are made to secure special effects. One of the most common is thick siding made to give the appearance of logs.

Application of Wood Siding

Siding should be delivered to the building jobs as close to the time when it will be installed as possible. The lumber sheathing to which it is to be attached should be dry.

Bevel siding should be lapped according to width. For 4-inch siding a ¾-inch lap is suggested while that recommended for 10-inch is 1½-inch.

End joints in adjacent courses of siding should be staggered. They should be accurately cut and run vertically. In some cases the butt ends are cut on a bevel so the faces slightly overlap. With narrow siding the courses can be so arranged that the edges coincide with the bottoms of window sills and the tops of dry caps at window and door heads. Corners should be carefully mitered unless there is a vertical piece of trim at corners called corner boards against which the ends of the siding can be butted. To look well and keep out moisture mitered corners must fit closely and stay in place. Open miters are nearly always the result of using siding which has not been properly seasoned or has been exposed to moisture after delivery to the job.

Corner boards, sometimes used with bevel siding and very commonly with drop siding, should be thicker than the siding and should lie flat against the building paper with siding butting up to them. One piece should be wider than the other by the thickness of the piece so they will have the appearance of the same width when in place on the building. Corner boards should not be nailed on over the top of the siding. This produces pockets which permit the entry of water back of the boards.

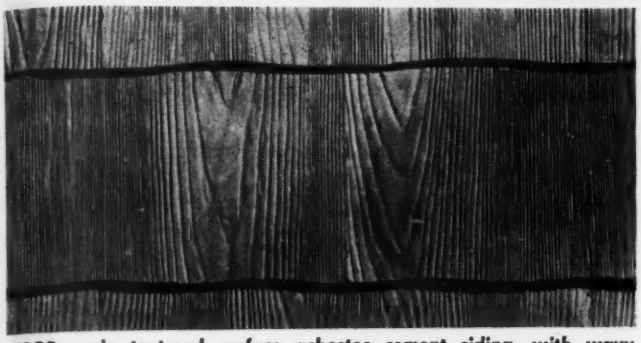
Nails cost little compared with the cost of siding, shingles and labor. Siding which will last for generations should be applied with nails which will last. Copper or zinc coated nails will hold the siding permanently. They are a good investment.

For ½ inch bevel siding 6d nails (six penny) are used and 8d for ¾ inch siding.

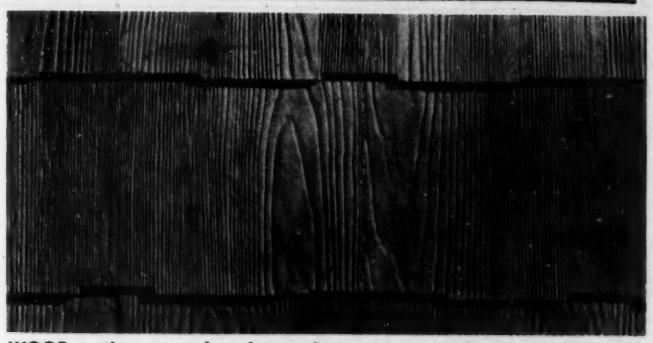
SIDING SIZES AND ESTIMATING QUANTITIES

	Counted Width Inches	Dressed Dimension: Standard Thickness Inches	Dressed Dimension: Standard Face Width Inches	Exposed Face	Estimating Allowance Add to Area
Bevel Siding	4	7/16 x 3/16	3½	2¾ *	45%
	4			3	33%
	5	¾ x 3/16	4½	3¾ *	35%
	5			4	25%
	6	¾ x 3/16	5½	4½ *	33%
	6			4¾	27%
	6			5	20%
	8	7/16 x 3/16	7¼	6*	33%
	8			6¾	20%
	10	9/16 x 3/16	9¼	7¾ *	29%
	10			8¾	15%
Drop and	4	9/16	3⅛		28%
Rustic—	5	¾	4⅛		21%
(Shiplapped)	6		5 1/16		19%
	8		6⅞		16%
Drop and	4	9/16	3¼		23%
Rustic	5	¾	4¼		18%
(dressed &)	6		5 1/16		16%
(matched)	8		7		14%

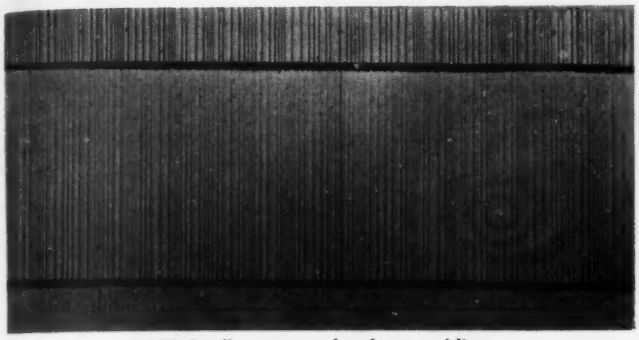
* Recommended Maximum Exposed Face.



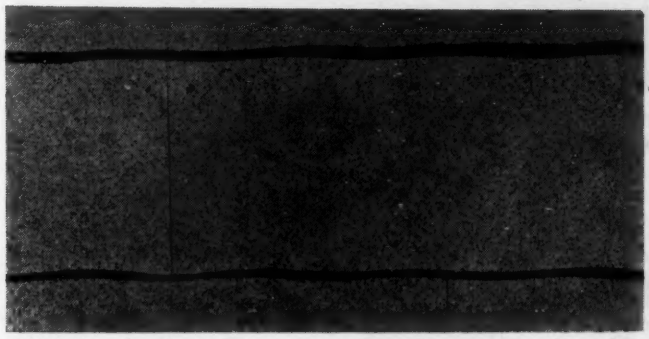
WOOD grain textured surface asbestos cement siding, with wavy exposed butt line.



WOOD grain textured surface asbestos cement siding with staggered butt line for thatch method.



TAPERED line textured asbestos siding.



SMOOTH surfaced asbestos cement siding with wavy exposed butt line.

STYLES OF ASBESTOS CEMENT SIDING

HOW TO AVOID PAINT TROUBLES ON SIDING

1. Use clear heart kiln-dried siding only.
2. Keep siding dry in storage.
3. Be sure sheathing is dry when siding is installed.
4. Paint ends of siding with thick paint when installing —or before. (In pile.)
5. Use galvanized nails.
6. Leave NO open joints when installing siding—butt ends of siding tight against corner boards and casings; also against ends of adjacent pieces of siding, including corner mitres.
7. Ends of siding against sloping roofs should be trimmed back at least ¾"—and should be painted.
8. Metal corner pieces must be fitted water-tight.
9. Make tight construction at eaves to prevent entrance of water during windy, driving rains.
10. Extend roof sheathing and paper beyond the outside of wall siding, so that any condensation on underside of roofing material runs off outside of the siding, and not into stud space or under siding. Lower edge of frieze board to be against outside of siding.
11. Lowest course of siding should be at least 6" above ground.
12. Carefully install approved vapor barrier as close as possible to the warm side of the wall—especially when there is insulation in the wall.
13. Make sure the sheathing paper is NOT a vapor barrier.
14. Carefully install flashing over all windows and doors, extending metal down over edges and ends of well-sloped water tables—prevent water getting in back of siding or jambs. Edge of siding should not rest down tight against "near level" water tables over doors or windows.
15. Use a good grade of paint—do a good job of painting.
16. Don't paint on a damp day—or a cold day.
17. After installing siding, apply prime coat of paint immediately—before rain occurs. (Of course, priming all surfaces before installing would be ideal.)
18. Do all plastering and let plaster dry thoroughly throughout its full thickness before applying second and third coats of paint. Leave windows open during drying of plaster.
19. Prevent movement of moisture to stud spaces from basement or crawl spaces.
20. Ventilate attics that have insulated floors.
21. Start out with dry siding, keep it dry, and prevent water or condensation getting behind the siding.

ASBESTOS CEMENT SIDING

Asbestos cement siding is a long lasting exterior sidewall covering for either new or old homes. Made of like materials, it has the same fundamental characteristics as asbestos roofing shingles. It is produced, however, in shapes, colors and surface textures particularly designed to give attractive appearances to exterior walls.

Sizes

Most asbestos siding is made in shingles 24 inches wide and 12 inches deep. They are lapped 1½ inches at the head, giving an exposed surface of 10½ by 24 inches. In addition, clapboards of greater width and sometimes shorter depth are made by some companies.

Characteristics

Asbestos cement siding was introduced to meet a demand for a durable, fireproof exterior wall covering which would need little or no maintenance. Its selling points include:

Durability—Rocklike in composition, asbestos siding is not affected by weather or other common causes of wear. It will last as long as the building to which it is applied, without curling or warping.

Fire Protection—Asbestos siding is completely noncombustible. It reduces external fire hazards to a minimum, especially when applied to a building with fireproof roofing.

Low Maintenance—Some materials exposed to the weather require painting or other preservative treatment every few years. During the lifetime of a building this maintenance may add up to a considerable sum—often many times the first cost of the siding. Asbestos siding does not require preservative attention of any kind. It becomes harder and tougher with age and exposure. Maintenance costs therefore are a very minor consideration.

THIS NEW HOUSE is finished with overlap joint insulating siding shingle panels. The new product has been accepted by FHA for new construction.

BUILDING PAPER has many uses in construction. On the exterior it is used between sheathing and siding, roof deck and roofing. It also serves between sub-flooring and finish flooring.

Attractive Appearance—Asbestos siding is attractively styled. Textures and colors suitable for various types of architecture are available. Applied over worn sidewalls it gives modern charm and beauty to buildings formerly drab and unsightly.

Termite and Rodent Protection—There is no organic matter in asbestos siding, so termites leave it alone. Rats, mice and other rodents will not gnaw through asbestos cement, so they are no menace to this type of siding.

Economical in Cost—Asbestos siding is economical in price and inexpensive to apply. The savings they effect in maintenance quickly repay their cost.

Asbestos siding is sold by the square (sufficient shingles to cover 100 square feet of space when applied in accordance with manufacturer's directions). Backer strips to be used behind the vertical joints are included. Special rustproof face nails are provided by the manufacturer. Headlap nails must be supplied by the user.

Application

A layer of waterproof felt or waterproof backing board should be applied to the area to be sided before the asbestos siding is put on.

Joints are protected by the use of felt backer strips, furnished with each square of shingles. When re-siding, 1 pound of 2-inch galvanized needle-point nails per square are required; over new work, ¾ pound of 1¼-inch nails.

Asbestos caulking putty should be applied, before asbestos shingles are placed, at all mitered corners and wherever the shingles butt against wooden trim, masonry or other materials. Care should be taken in applying the putty to avoid smearing the face of the shingles.

In re-siding work, the existing wall surfaces should be as smooth, plumb and true as possible. All loose shingles, clapboards, etc., should be securely nailed. Beveled wood strips, commonly called "horsefeathers", are obtainable—and these can be applied to even up the wall surfaces.

When stucco walls are in good condition, asbestos cement shingles can be put on over the stucco by first applying wood nailing strips. If the stucco is not in good condition it should be removed—also all nails, wires or other projections—and the sheathing covered with asbestos asphalt felt or saturated rag felt.

Where the use of asbestos siding shingles over old siding brings the finished wall surface out beyond existing window and door frames, new staff moulding should be provided.

Adequate flashing should be applied over all window and door openings and a suitable drip edge provided under all openings.

INSULATING SIDING

One new product, which may in time be considered revolutionary is the development of overlap joint insulating siding shingle panels. The Federal Housing Administration has issued an acceptance bulletin UM-8 "Asphalt Insulating Sidings," explaining to their field offices how to evaluate the product when insuring FHA mortgages on homes where insulating siding is used.

Contractors and builders have found as much as a 25% savings in wall material costs when using insulating siding shingle panels on new construction.

Wood sheathing is applied over the stud framework. A class D waterproof paper is laid over this sheathing before applying the insulating siding.

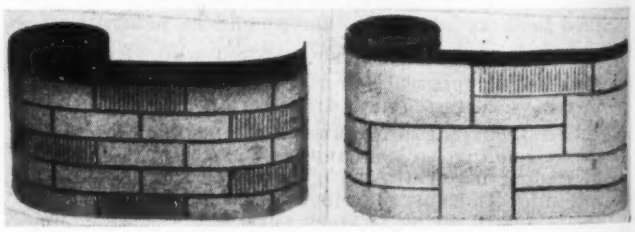
On the inside (warm) wall a vapor barrier is installed on homes where the outdoor sign temperature for heating is below 20 degrees.

Ten to fifteen 13 gauge 1½" galvanized nails are used in securing each panel. The Insulating Siding Association has published a detailed application manual which gives recommended installation techniques for applying insulating siding. These are available upon writing the association office—530 Echo Lane, Glenview, Illinois.

Insulating Sidings are rigid panels of insulation board which are first weather-proofed with a surface impregnation of asphalt. Then the exposed side is coated with high-grade asphalt into which mineral granules are embedded. They provide attractive exterior finish plus insulation and never need painting.

Complete instructions for application and nailing are contained in each package.

ASPHALT BRICK SIDING



To answer the demand for the economical residing of homes, industrial buildings, stores, and farm buildings, the manufacturers of asphalt products have developed two types of materials: Asphalt Roll Sidings and Insulated Sidings.

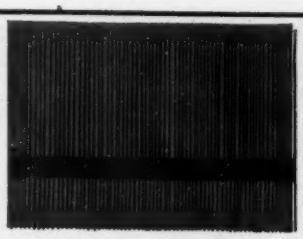
Asphalt Roll Sidings are an imitation of brick or stone in roll form. They are quickly and easily applied, provide attractive, durable finish at low cost, help make a building wind and water tight, and end the painting of side walls. Applied with ½" insulating board sheathing as a "backer" over old siding, they add insulation to the buildings.
2 sq. ft.

ALUMINUM ROOFING AND SIDING

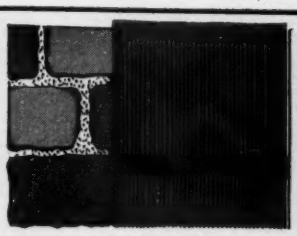
With improved production methods and a tremendous post-war production capacity combining to bring aluminum within the scope of many new uses, the highly-skilled engineering staffs of aluminum manufacturers and fabricators are today giving increasing attention to the application of aluminum to building needs.

One result has been the development of a number of new types of aluminum roofing and siding. New aluminum roofing and siding products have been introduced in the past few years and it seems probable that new and im-

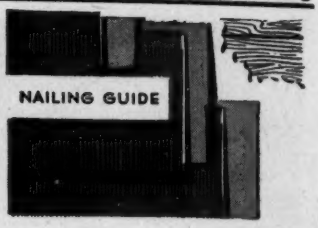
Customers have a choice of smooth-surfaced stained shingles with visible joints or



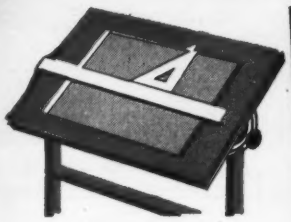
Grooved surfaced shakes which have invisible joints and resemble handsplits.



They are excellent for use with other building materials.



Application is easy as ABC. Shiplap nailing guide is the only "extra" tool needed.



Easy to specify, the complete specification range is covered in Sweet's 8d/ST.

14 reasons why
SHAKERTOWN SIDEWALLS
are easy to sell

★ They are *economical* to buy and economical to apply.

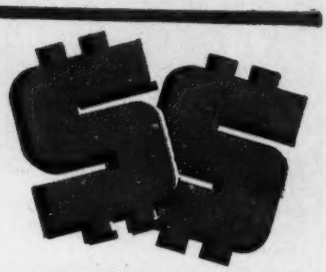
★ They are *pre-stained* in a wide selection of colors to save on building cost.

★ They are *available* for prompt delivery from centrally located warehouses.

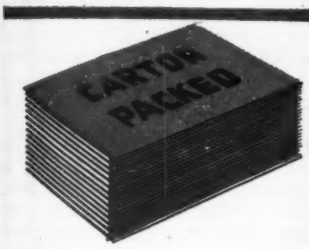
★ They build a home of long-lasting *beauty* and *minimum upkeep* cost.

Project home builders are enthusiastic about Shakertown Sidewalls because they eliminate the costly work of painting. This feature alone has accounted for the sale of thousands of squares of Shakertowns to project builders. Note the other sales features shown on this page.

WRITE DIRECT for full particulars

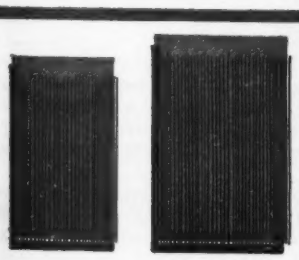


Homeowners get greater value, dollar for dollar, with stained shingle and shake sidewalls.

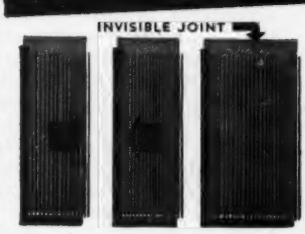


Carton packages make stained shingles and shakes easy to store, clean to handle, easy to deliver.

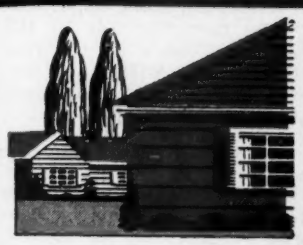
Distribution is convenient to dealers everywhere.



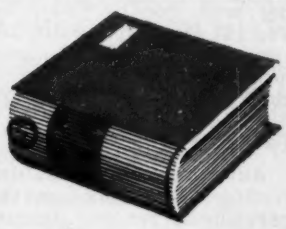
16" and 18" lengths provide wide choice of weather exposures to make project homes look different.



Edges of shakes are true parallel. Joints are tight and blend with the grooved texture.



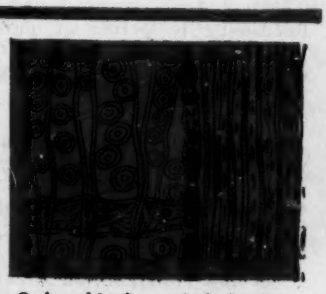
Every shingle and shake home is an advertisement. One home will lead to the sale of another.



Architects approve and recommend cedar shingles and shakes. Sweet's file has 8 pages of data.

Your Assurance of Quality—All Shakertown Sidewalls are No. 1 Certigrade red cedar shingles. They are backed by over a quarter century of recognized leadership and preference for Perma excellence of quality. Architects, builders and homeowners alike—all prefer the outstanding value of naturally beautiful, naturally better Shakertowns.

Stained shingles are excellent material for roofs as well as for sidewalls. A real roof value.

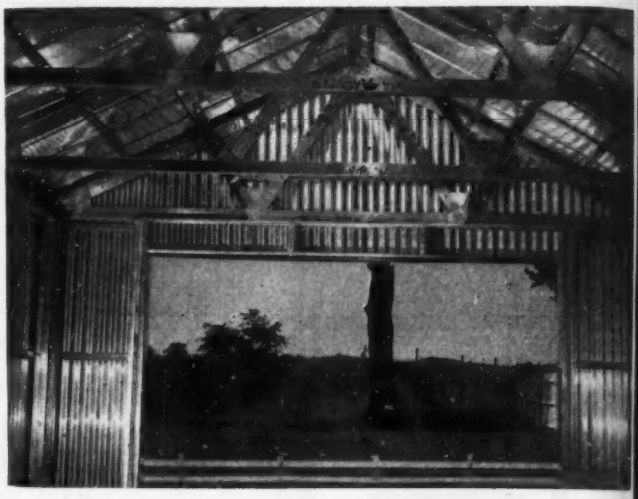


Cedar shingles and shakes have millions of microscopic insulating cells to resist heat transmission.

The PERMA PRODUCTS Company

EXCELLENCE PERMA OF QUALITY

5455 BROADWAY AVE. CLEVELAND 27, OHIO



ALUMINUM as a roofing and siding material is fabricated in various ways for use in residential, commercial, and farm construction. At the left, aluminum bevel siding is being applied to an army barracks. At the right, an aluminum utility building has framing, siding, and roofing of this metal.

proved types of aluminum roofing and siding can be counted on to make their appearance in future years as engineering laboratories continue their testing and research in this field.

Types of Aluminum Roofing and Siding

Over half a million farm buildings have been roofed with aluminum roofing sheet since the product was introduced several years ago. Only this month the third largest aluminum producing company in the nation introduced its aluminum clapboard siding and roofing which are produced in 10, 12, 14 and 16-foot lengths, with a curved face to increase strength and eliminate highlights and wrinkles. These products are prime-coated before shipment, are shipped 200 square feet to the nested box. In application, each piece of siding and roofing joins the next by a spring-tensioned joint.

Among the various types of aluminum roofing and siding now on the market are interlocking shingles, standing seam roofing (supplied by one manufacturer in 101 and 141 lineal foot rolls, 26½ and 20 inches wide, to cover two roofing squares), corrugated roofing with an interlocking seal, V-crimped roofing and siding, clapboard siding, and sheet siding crimped to look like clapboard.

Characteristics

Advantages that manufacturers point out for aluminum roofing and siding are these: fireproof, rust-proof, impervious to rot and insects, light weight, easy to handle, can be cut and worked with ordinary carpenter tools, will take any regular house paint (requires 15 to 20 per cent less paint than porous materials), will not split or check, is easily stored and goes into place fast in construction. There are no exposed nail holes to putty and it is not necessary to prime or paint the surface except in the tidewater or salt air sections. Due to its reflective properties, it provides considerable insulation.

Application

The metal siding can be applied over any surface where wood, asbestos, asphalt, brick or any other facing material is applied. Application is sufficiently easy that anyone without experience can apply aluminum siding. The only tools needed are a hammer, tin shears, a hack saw or a similar saw.

On new construction sheathing may be eliminated. This speeds construction and affords a substantial saving in cost. Studding should be fully corner-braced in accordance with FHA minimum standards. A blanket insulation should be installed between the studs with the tabs stapled on the outside. The aluminum siding is then applied directly to the studs without sheathing. Inside wall board insulation or plaster can then be handled in the customary way. Good practice includes a vapor barrier on the inside wall construction.

Do not use ordinary steel nails. Nor should ordinary galvanized roofing nails be used as the plated coating tends to chip off.

Aluminum nails are best for aluminum building products. Lead headed hot dipped zinc coated needle point nails are strongly recommended for use in rural areas. In industrial and seacoast regions the lead headed nail is not recommended, but the use of a chromate impregnated tape washer or neoprene washer is highly recommended. Nails should be spaced approximately 16 inches on center. Nails 1 inch long will suffice for almost all applications.

Steel and iron must not be allowed to contact the aluminum sheets at points where moisture may collect; or where poor sealing allows moisture to penetrate the roof; or where insufficient mechanical support or excessive loading may cause collapse. When aluminum and steel have moisture between them, a small electric current flows, causing holes or pits in the aluminum with subsequent deterioration of the aluminum sheet. Any means of avoiding actual metal-to-metal contact at those points where moisture collects will protect against this action. This can be done by providing a protecting sleeve or saddle of aluminum to cover the steel at the point of contact; by the use of a non-conductor such as building paper; or by painting with aluminum paint which provides an aluminum-to-aluminum contact at the moisture collecting point between the roof and the support. Steel nails or ordinary galvanized roofing nails must not be used for nailing. Aluminum nails are best.

Because proper erection and installation methods are necessary to assure long life for aluminum siding and roofing, it is imperative that your manufacturer's directions be carefully studied.

BUILDING PAPER

Its primary use, as its name implies, is over sheathing in residential construction where it prevents the infiltration of moisture, dirt, and wind into the interior of the wall. Other residential application include dry sheet under roofing, between the sub and finished floor, the curing and protection of newly laid concrete and over the sub-fill. Building paper in wide widths is the contractors "natural" for the protection of building materials stored at the job site in place of higher priced tarpaulins.

Building paper is used very extensively in the farm field for a number of uses. These include temporary silos, covering baled or stacked hay, lining poultry houses, to name a few.

Experiments recently conducted at the University of Pennsylvania under the auspices of the Federal Housing Administration have proved that building paper when used in sidewalls of a residence need not be of the porous or breathing type. These tests have shown that on an uninsulated house, insofar as condensation alone is concerned, that it makes no difference what type of building paper is used. These tests also show that on an insulated side wall, a vapor barrier is essential, and if a vapor barrier is used it should not be more porous than the sheathing paper.

Building paper is offered in rolls ranging in widths from 6 inches to 84 or 96 inches wide—also in many instances it can be obtained in blankets or covers of much wider widths.

Section 12 Insulation

WHY INSULATION IS NECESSARY

All building materials such as wood, masonry, etc., and even wide air spaces permit the passage of heat from the interior to the exterior in winter or from the exterior to the interior in summer. This applies even to insulation. Insulation does not completely stop the passage of heat but it is manufactured for the express purpose of retarding the greatest possible amount of heat in area insulated.

By reducing heat transfer through walls, ceilings and floors in winter, insulation raises the inside wall and ceiling surface temperatures in a heated house to such an extent that the falling currents of air (drafts) resulting from warm air coming in contact with chilled surfaces are noticeably diminished. Thus, all areas of living quarters become comfortable for the occupants and the danger of colds brought on by drafty conditions is reduced. The same barrier will bring about indoor summer comfort.

How Heat Is Transferred

Heat is transferred in three ways—by conduction, convection, and radiation. Insulation affects each means of transfer.

Conduction is the flow of heat through a solid such as the heat from boiling water passing along the handle of a silver spoon. So, in lesser degree, the heat generated inside or outside a room flows through walls, ceilings, and floors. When a barrier of insulation is interposed, the flow diminishes.

Convection is a transfer of heat by moving currents of air. As such currents move past a warm surface they pick up the heat and carry it with them. Although hollow spaces in walls may be part sealed, a difference in temperatures between top and bottom of the sealed areas creates currents of air, which always carry heat from the warmer side to the colder.

Radiation is the process by which the sun's energy is carried to the earth. Any warmer surface transfers heat by radiation to any cooler neighboring surface. This radiant transfer even takes place within a room and between the walls of a room, thus the warmer walls of a house radiate heat to the colder ones.

The passage of heat through building materials is chiefly by conduction, the heat always going from a warmer area to the colder side. There are several factors that determine this passage of heat. They are:

(1) Temperature difference between the two surfaces—the greater the difference in temperature the more heat per unit of time that will be transferred. If you have an inside temperature of 70° and an outside temperature of 0°, more heat units per hour per square foot will go through the wall than if the outside temperature were 30°.

(2) Thickness—less heat is transferred through thicker materials (Conductivities being equal).

(3) Area—the larger the wall or ceiling area, the greater the amount of heat transferred.

(4) Time—the amount of heat transferred is proportional to the number of hours during which the heat flow takes place.

(5) Rate—rate of heat transfer will affect the amount of heat going through a wall. This will depend on the physical characteristics of the material and how fast a material conducts the passage of heat, and the temperature difference between the high or low point.

Advantages of Insulation

Insulation insures comfort because:

1) It provides more even temperatures in the house.
2) It cuts down drafts, eliminates cold corners, thereby protecting the health of the family.
3) It makes the house cooler in the summer by retarding the flow of heat into the house from the outside.
4) It assures year round comfort.

Insulation saves money because:

1) It reduces heat losses, thereby saving fuel and lowering fuel costs.
2) An insulated house requires a smaller heating plant.
3) Insulated houses make old heating plants last longer because of the smaller load.
4) It saves painting and decorating bills, as dust and dirt are not attracted so much to warm surfaces as to cold surfaces. Reduces house cleaning work.

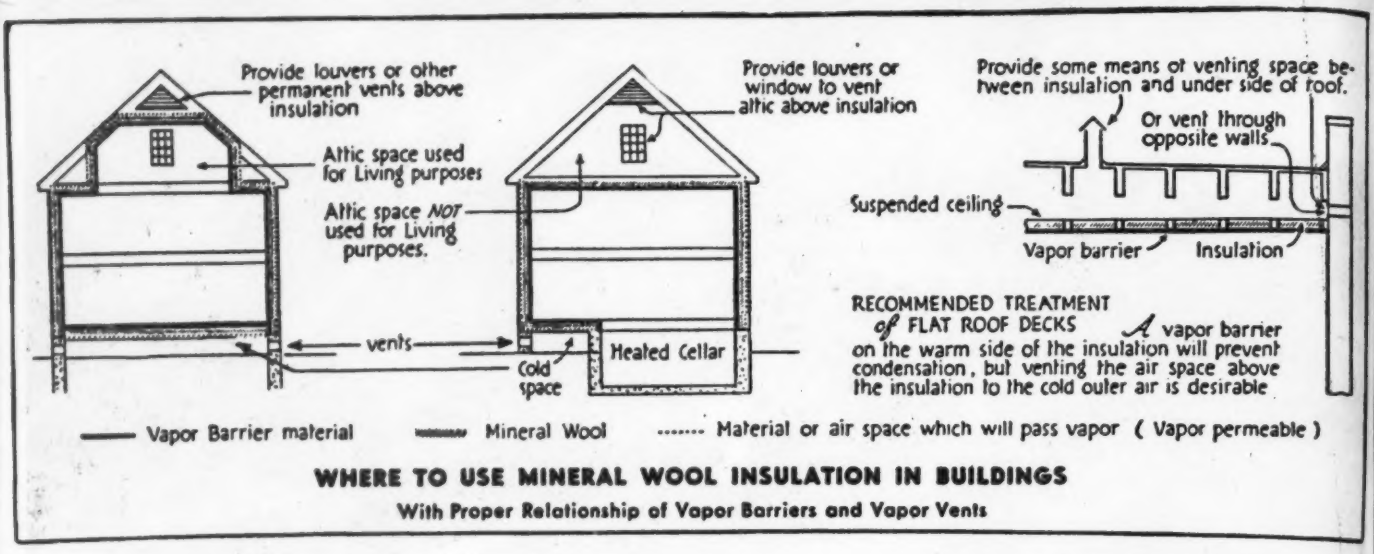
Insulation gives these plus values:

1) Increased property values.
2) Increased resistance to fire.
3) By eliminating "hard-to-heat" rooms, more liveable space is added to the house.
5) Makes "intolerably hot" rooms useable in summer.

WHERE TO USE INSULATION IN BUILDINGS

The best location of the insulation depends on the house and the use of the attic spaces.

All exterior walls and all walls adjacent to unheated areas, such as attached garages and attic stairs should be insulated.


Provide louvers or other permanent vents above insulation
Attic space used for Living purposes
Attic space NOT used for Living purposes.
vents
Cold space
Heated Cellar
Provide louvers or window to vent attic above insulation
Provide some means of venting space between insulation and under side of roof.
Or vent through opposite walls
Suspended ceiling
Vapor barrier
Insulation
RECOMMENDED TREATMENT of FLAT ROOF DECKS
A vapor barrier on the warm side of the insulation will prevent condensation, but venting the air space above the insulation to the cold outer air is desirable
Vapor Barrier material
Mineral Wool
Material or air space which will pass vapor (Vapor permeable)

WHERE TO USE MINERAL WOOL INSULATION IN BUILDINGS

With Proper Relationship of Vapor Barriers and Vapor Vents

Courtesy of NATIONAL MINERAL WOOL ASS'N.

If a house has an unoccupied attic or space between the ceiling and a flat roof, the ceiling should be insulated.

If a house has no space between the ceiling and the roof, because either the attic is occupied or there is a flat or shed roof, the roof should be insulated. If a house has no basement or has a room over an unheated space such as a room over a porch, insulate the floor over the cold space.

HOW MUCH INSULATION SHOULD BE USED

The amount of insulation that should be used depends on

1) The cost of fuel
2) The severity of the climate
3) The reason for insulating (comfort or economy).

It is impossible to stop all heat loss, as no insulation is 100% efficient. But good insulation can retain as much as 75% of the heat that would otherwise escape. While, in theory, it is impossible to use insulation too thick, there is a point of diminishing returns just as in a modern factory. The first half inch produces great savings in fuel consumption, but soon a saturation point is reached and more insulation will have little noticeable effect. For example, a wall insulated with a one-inch blanket will show a reduction in heat loss of 48% over an uninsulated wall, a two-inch blanket 62.4%, a three-inch blanket 69.6% and a 3½" blanket 71.6%. For that reason, manufacturers seldom produce a type of insulation over three inches thick.

TECHNICAL RATINGS OF INSULATION

Standard methods of testing insulating materials have been established. It is possible to give comparisons of the rate at which heat will pass through a given thickness of insulating materials. Laboratories also can measure the flow of heat through the different types of insulation materials in combination with the different materials used in the construction of walls, ceilings and roofs of houses. This measurement of the overall heat transmission coefficient is called the "U" factor. With this factor there is a mathematical formula by which fuel savings can be figured. This proves too technical for the average homeowner. See chart in this section which makes it easy to show the homeowner the approximate savings attained with the use of different forms of insulation in different types of construction.

VAPOR BARRIERS

Water vapor is always present in the air of a room. Under certain conditions this water vapor will pass through the walls of a room and in cold wheather may condense within the walls and ceiling. The presence of condensation lessens the value of the insulation, may cause paint failures, both inside and out, and in time causes building materials to deteriorate. A vapor barrier (a membrane through which water vapor will not pass readily) is essential to prevent moisture from reaching the insulation and the wall structure. Metal foils, specially treated asphalt felts, or laminated kraft papers make good vapor barriers. Ordinary tar papers or roofing felts are not satisfactory. Vapor barriers are always placed on the warm side of a wall.

VENTILATION OF ATTIC SPACES

The space above an insulated ceiling should be ventilated to the outside air in order to carry off any water vapor. At least two louvres should be located so as to provide good air circulation. One square foot of opening should be allowed for each 250 square feet of attic floor area. These louvres should be left open the year round.

TYPES OF INSULATING MATERIALS

Basic materials that have proved themselves suitable for manufacture into insulating products are generally classified as follows:

A. MINERAL
   1. Rock Wool
   2. Glass Wool
   3. Slag Wool
   4. Vermiculite
   5. Expanded Mica
   6. Aluminum, Metal Foil

B. VEGETABLE
   1. Cellulose Fibre
   2. Cotton
   3. Creped Paper
   4. Shredded Paper
   5. Wood Fibres

The numerous forms into which these materials are processed will solve every conceivable insulation problem. All phases of the utilization and application of these many finished products have been exhaustively studied by the individual manufacturer. The general public can accept these findings with confidence that they will perform as specified in all types of construction and under all climatic conditions.

An index of the various types of insulating products follows:

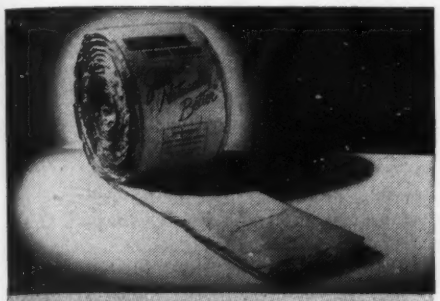
A. Blanket Insulations
   1. Wood or mineral fibre, lined or wrapped on one or both sides with vapor barrier on warm side.
   2. Multiple layers of asphalt treated wood fibres stitched to creped cover, and compressed for shipment.
   3. Insulating papers, with vapor barrier on warm side.

B. Batt Insulations
   1. Plain (no vapor barrier).
   2. Vapor barrier on warm side, plain on other.

C. Loose Fill Insulation
   A wide variety of loose materials, fibrous and granular, and usually made of:
   1. Mineral, rock, slag or glass wool.
   2. Vegetable or mineral granules.

D. Structural Insulating Board
   1. Building Board
   2. Sheathing
   3. Lath
   4. Tileboard (panels)
   5. Plank
   6. Roof Insulation Board

Money Makers every one of them!

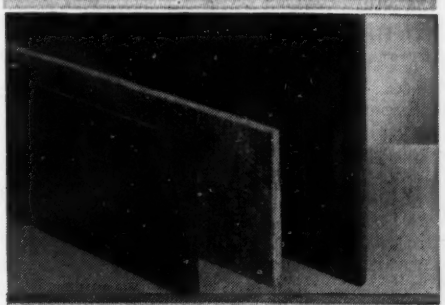


FIBERGLAS ROLL BLANKETS—Asphalted, vapor-resistant paper on one side. Perforated paper on other side. Available in 15", 19" and 23" widths; thick, medium and "economy" thicknesses.

FIBERGLAS BATT BLANKETS—15" wide available in 24" and 48" lengths; 23" wide in 36" lengths. Same type of construction as roll blankets. Vapor barrier on one side. Thick, medium and "economy" thicknesses.

FIBERGLAS UTILITY BATTS—15" wide, 10¾" long. For general use, packing into narrow spaces and irregularly shaped spaces. Available full thick only.

FIBERGLAS POURING WOOL—For pouring or hand packing in spaces between studs and joists. Packed in paper bags, 20 sq. ft. at 4" thickness per bag.



FIBERGLAS PERIMETER INSULATION—For stopping heat losses through the concrete floor slab of basement-less homes. Available in three types: PF panels 12" x 48" x ⅞" and AE (asphalt enclosed) panels 12" x 36" x 1", 1½" and 2". Paper-faced 6-lb. density 24" x 60" x ¾", 1", 1½" and 2".

FIBERGLAS INSULATION FOR CRAWL SPACES—For underside of floors built over unexcavated areas. Available in a wide variety of types and sizes.

FIBERGLAS CAVITY WALL INSULATION—A pouring type product approved by Structural Clay Products Institute for masonry construction. Packed in 30-lb. bags.

OWENS-CORNING
FIBERGLAS

Are you selling *all* these Fiberglas* Building Insulations? You're missing sales—and profits—if you're not!

For every one of these well-known products is tailor-made to do its job better than any other material. Your builder customers buy all of them . . . *in volume.*

Why not get those profits for yourself?

Fiberglas Insulation turns over fast, is easy to handle, easy to store. Consistent advertising and promotion presells it. And superior quality keeps it sold.

Get complete information on *all* these money makers today! Ask your jobber or write any one of the five national distributors listed below.

ARMSTRONG CORK CO. Lancaster, Pa.

CERTAIN-TEED PRODUCTS CORP. Ardmore, Pa.

THE FLINTKOTE COMPANY New York, N. Y.

MINNESOTA AND ONTARIO PAPER CO. Minneapolis 2, Minn.

KELLEY ISLAND LIME & TRANSPORT CO. Cleveland, Ohio

Or, write Owens-Corning Fiberglas Corporation, Dept. 64-D2, Toledo 1, Ohio.

*Fiberglas is the trade-mark (Reg. U. S. Pat. Off.) of Owens-Corning Fiberglas Corporation for a variety of products made of or with fibers of glass.

is in your life..for good!

E. Slab (or Block) Insulations
   1. Corkboard
   2. Wood fiber and cement
   3. Mineral wool with binder
   4. Insulating board slabs
   5. Asphalt-Vermiculite slabs
   6. Hard rubber
   7. Cellular Glass

F. Reflective Insulations
   1. Aluminum foil
      a. Plain (no paper backing)
      b. Paper backed foil
      c. Accordion pattern
   2. Aluminum foil-surfaced plaster board
   3. Dull sheet steel

G. Miscellaneous
   1. Confetti-like material sprayed on with adhesive.
   2. Combinations of aluminum foil with other types of insulation such as blankets and structural insulating board.
   3. Insulating board core surfaced on one or both sides with asbestos-cement board, metal or other material.
   4. Multiple layers of corrugated paper.
   5. Cellular mass made from liquid resin.

WHAT TYPE OF INSULATION TO USE

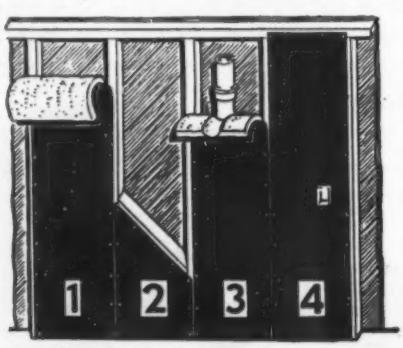
No single insulating material is best for all the various applications possible in new or existing houses. The selection of one type of material over another depends on
1) the amount of insulation needed
2) the cost of the material and the labor to apply it
3) the limitations of the building itself.

BLANKET TYPE INSULATION

They are made from various processed mineral wool and vegetable fibers and animal hair, including mineral wool (rock, glass, and slag), wood fiber, cotton and cattle hair. The fibers in most cases are either naturally fire, moisture and vermin-resistant or are treated to render them so.

Blanket materials are sold in long lengths (40′ to 100′ depending on thickness) which makes them easily installed in large areas where a minimum of cutting and fitting is required. They are manufactured in widths suitable for inserting between the structural framing members of the building—usually about 15 inches for framing on 16 inch centers and 23 inches wide for 24 inch centers. A nailing flange is provided on each side of the blanket so that it may be nailed or stapled into place on either the face or inside edge of the framing member. Blanket insulations are available in one, two and three inch thicknesses. These thicknesses are given different names by competing manufacturers, such as full-thick, medium, standard, etc.

INSTALLATION ON SIDE WALLS



Installation of Blankets or Strips

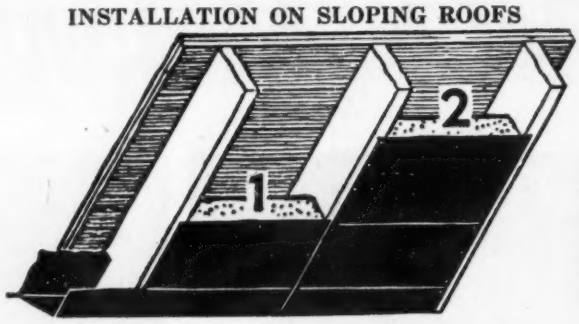
1. Cut continuous strips to the required length for each stud space, allowing sufficient length for installation below floor line for fire-stopping and for attachment at top and bottom. Completely insulate each stud space, fastening the flanges of the vapor barrier to the studs.

2. Cut strips to fit angles, corners or irregular spaces, always providing a flange on the vapor barrier for fastening.

3. Large pipes may require removal of some of the wool, retaining the vapor barrier. To protect water pipes from freezing apply insulation on the cold side only removing the vapor barrier intact.

4. Cut vapor barrier to fit snugly around electrical outlets, protruding pipes, etc.

INSTALLATION ON SLOPING ROOFS



1. Install first batt, or end of blanket, at bottom of rafter panel, fitting it snugly against the U-shaped seal. Attach flanges to rafters.

2. Install successive batts the same way, butting them closely together.

3. Blankets should be attached to the rafters by the vapor barrier flange, starting at the eave line and progressing upwards. Allow sufficient length at ends for overlap and attachment at eaves and collar beams or ridge.

APPLICATION ON MASONRY WALLS

In order to apply blanket insulations to masonry walls it is necessary first to install furring strips vertically and the proper distance apart, usually 16 inches on centers. The furring strips usually are either 1 x 2 or 2 x 2 inch wood strips and are attached to the masonry walls by securely anchoring them to the wall. Where the wall is of solid concrete, it is necessary to drill holes in the concrete and to attach the furring strips by means of expansion bolts. The furring strips not only serve to level off the wall and provide a means of attachment for the blanket insulation, but also separates the insulation from the masonry by an air space, thus preventing any dampness from entering the insulation. Many blanket insulations are enclosed in a waterproof material which would protect them from such dampness.

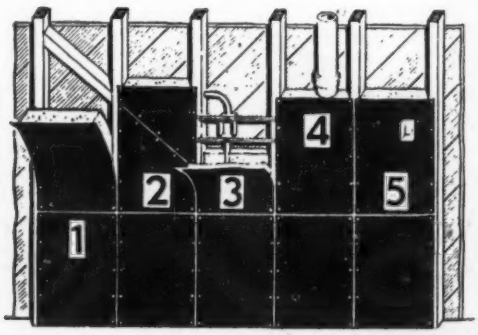
The insulation is then nailed or tacked in continuous strips to these furring strips. The ends of the insulation are fastened to sills, plates or headers in a similar manner. If an interior finish is to be installed, as is usually the case, the blanket insulation need only be tacked to hold it in place until the interior finish is applied. Blanket insulation having a nailing flange may be installed in a similar manner, the nails or tacks being driven through the flange into the furring strips.

BATT TYPE INSULATION

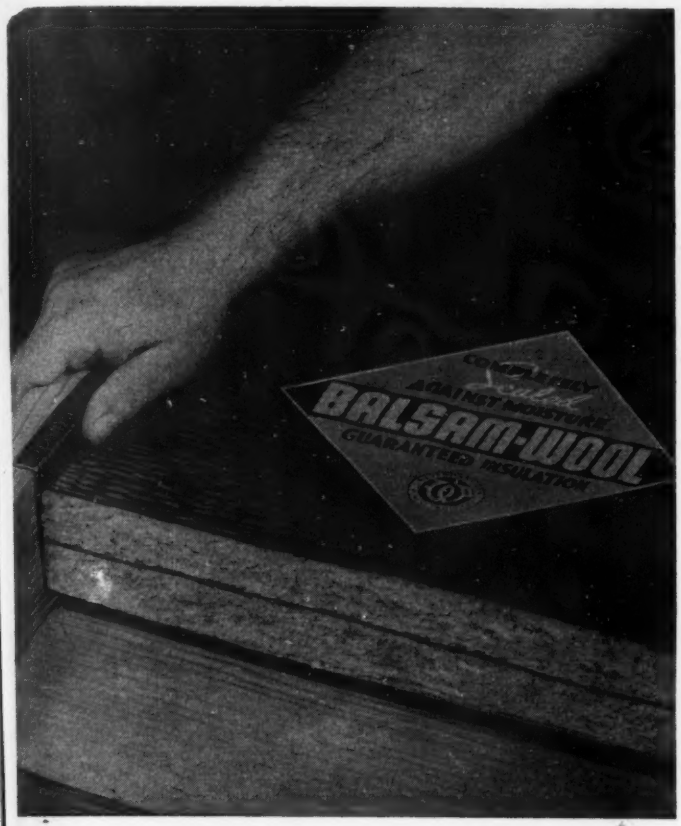
Insulation batts are similar to blankets except that they are 48 inches in length or under. They are manufactured in the same widths and thicknesses, too. Batt and Blanket type materials are interchangeable in their uses. The decision as to which type to use depends on the customer's preference. These two types are especially adapted for new houses and additions to old houses.

A vapor barrier is recommended where plain batts are used and is applied on the warm side of the wall as soon as the batts are in place.

Installation



1. Start at bottom of stud space, installing Mineral Wool below floor line for fire-stopping. Completely insulate each stud space, snugly butting successive batts together and fastening the flange of vapor barrier to the studs. Where required at sills, plates, etc. provide additional flange on the vapor barrier by cutting away the wool but leaving vapor barrier for overlap on framing.



BALSAM WOOL®

Sealed Blanket Insulation

WOOD CONVERSION COMPANY
1ST NATIONAL BANK BUILDING DEPT. 120-42
SAINT PAUL • MINNESOTA

FACTS *You Can Sell!*

1. VAPOR BARRIER
Balsam-Wool has a continuous vapor barrier as an actual part of the insulation affording protection against wall condensation problems.

2. WINDPROOF
Balsam-Wool is completely enclosed in a tough covering that keeps chilling winds out, healthful warmth in, fuel bills down!

3. VIBRATION-PROOF
Balsam-Wool will not settle or pack down to leave uninsulated spaces. The felted wood fibers of the mat are double bonded to the liners.

4. POSITIVE APPLICATION
Special spacer flanges provide sure, rapid installation. These tough flanges are nailed or stapled to the face of the framing members. The result: a sealed, tight insulation; foolproof application!

5. DOUBLE AIR SPACES
Proper air spaces on each side of the insulating mat are provided for by the special flanges. These air spaces not only allow a wall to "breathe", but also have a definite additional insulating value.

6. LIFETIME PERMANENCE
Balsam-Wool is scientifically designed to provide a lifetime of comfort and fuel saving. Balsam-Wool on the job is your assurance of a satisfied customer. It's guaranteed!

About Balsam-Wool:

BALSAM-WOOL is a sealed, blanket-type insulation, meets Federal Specifications HH-I-571a. The insulating mat is made from clean new wood fibers chemically treated to retard fire, rot, termites, and vermin. The name "Balsam-Wool" is taken from one of the trees used—the Balsam Fir. These fibers or hollow cellular tubes, each containing many still air cells, are felted and bonded into a fleecy mat which looks, feels, and insulates like lambs' wool.

Balsam-Wool is sealed against the damaging effects of moisture by a continuous, built-in vapor barrier that fully meets Government specifications. Having a "k" value of .246, it is a highly efficient insulation.

BALSAM-WOOL

Data

	For Joists Spaced O.C.	Square Feet per Bundle	Number of Rolls per Bundle
Standard	16″	200	2
	20″	200	2
	24″	200	1
	33″	200	1
Double Thick	16″	100	2
	20″	100	2
	24″	100	1
Masonry Type	16″	250	2

Where to Use:

IN THE WALLS, floors, ceilings or attics of new construction; and in the attics of old construction. Also for sound deadening of walls and ceilings.

BATT INSULATIONS are installed similarly to blankets, and its qualities are also similar. Its selection is largely a matter of the preference of the applicator.

THE ABOVE PHOTO shows blanket insulation being applied to the side walls of new housing. It is being fastened with an automatic stapling hammer.

LOOSE FILL insulation may be poured between ceiling joists or blown into the framing cavity of sidewalls. Here a vermiculite insulation is being poured directly from the carton.

MANY INSULATION materials are now manufactured with a foil cover on one side. This gives the material additional reflective qualities that are desirable in certain types of installation.

2. Cut batts to fit angles, corners and irregular spaces, leaving flanges on the vapor barrier for fastening.

3. Where electrical cables or conduits obstruct the panel, split the batts and install part of the wool behind the obstructions, placing the remainder over the face.

4. Large pipes may require removal of part of the wool, but retaining the vapor barrier. To protect water pipes from freezing, apply insulation to the cold side only, removing it from the batt where the piping is located but leaving the vapor barrier intact.

5. Cut vapor barrier to fit snugly around electrical outlets, protruding pipes, etc.

LOOSE FILL INSULATION

Mineral Wool

Fill insulations are bulk materials which are usually sold in bags. Various types may be packed, poured or blown into open framing members.

Mineral wool includes three types of incombustible insulation called rock wool, slag wool, or glass wool, depending upon the nature of the material from which it is manufactured. Rock wool is made from rock; slag wool is made from slag. In both cases, they are melted in a high cupola with a hole at the bottom to let a molten stream of the material out. This passes through a blast of steam that blows the material into long hair-like "wool" threads, which, on cooling in the air, fall to the floor of a collecting chamber. From this first formation they may be fabricated into nodules or into batts or blankets. Glass wool is produced by melting glass sand and passing the molten mass through tiny orifices where, upon cooling, it is fabricated in a manner similar to that of other mineral wools.

Mineral wool-filled bearing partitions have been accorded a one-hour fire rating when faced with metal lath and plaster.

In some cases loose mineral wool is poured from bags into framing members where the space is accessible and it is practical to do so. More often it is blown into open and concealed spaces, such as unfloored ceilings or walls, by a blowing machine such as those already acquired by many lumber dealers. This machine is like a vacuum cleaner in reverse, and will produce a more uniform and more compact job than can be obtained by hand methods. The machine takes the material through a hose into spaces prepared for its reception. These spaces may be entirely concealed, such as the stud spaces in walls of existing houses where plaster is also already in place.

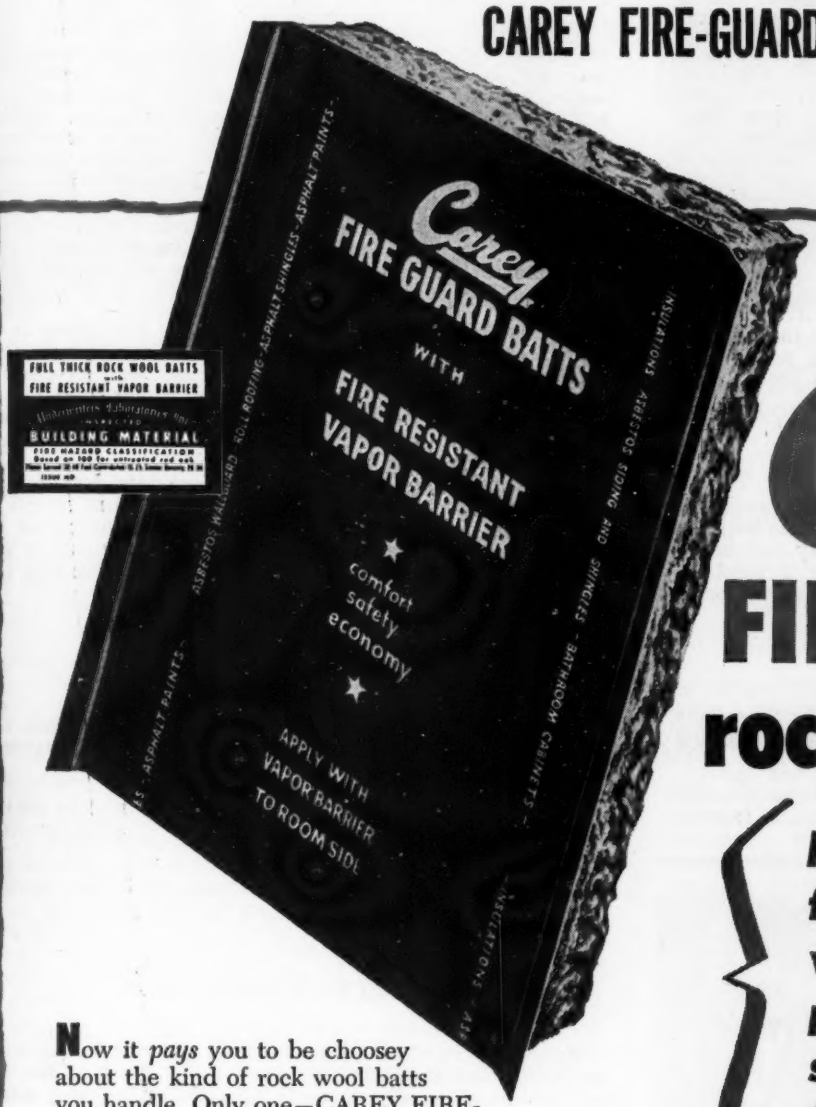
Wood Fiber Wool

There are several fill insulations made from wood fiber into a light-weight fleecy insulating material. These are generally treated to render them vermin repellent and moisture resistant. Some are also fire resistant. This type of insulating material is also fabricated into blanket insulations.

Vermiculite

Vermiculite is an inert, light-weight, granular insulating material manufactured by exploding an aluminum magnesium silicate mineral, which is a form of mica. This mineral is made up of approximately one million separate layers per inch. Between each layer is a minute amount of water. When flakes of the mineral are suddenly exposed to high temperatures in a specially designed furnace, the water between the layers changes to steam, causing it to explode into cellular granules or vermiculite insulation about fifteen times their original size. The final product is graded into different sizes for various uses, including building insulation, light-weight concrete and plaster aggregate.

GIVE YOURSELF AN EDGE OVER COMPETITION WITH CAREY FIRE-GUARD ROCK WOOL BATTS



ONLY

Carey

FIRE-GUARD rock wool batts

have a fire-resistant vapor barrier — provide comfort and savings with complete fire-safety!

Now it *pays* you to be choosey about the kind of rock wool batts you handle. Only one—CAREY FIRE-GUARD—gives you the big sales-making advantage of a special fire-resistant vapor barrier—and the proven "plus" of Underwriters' Laboratories, Inc. label on every package!

Once you show your customers how much they *gain* in fire-safety by installing FIRE-GUARD, your sale is practically made. You won't find many folks who don't put fire-safety first and foremost in the selection of materials that go into their homes!

The exclusive advantage of a vapor barrier that stops fire, doesn't feed it, is but one *extra* value of FIRE-GUARD batts. Your customers will like their greater resilience, uniform thickness, strong felted construction, flanged vapor barrier, resistance to moisture and vermin and the fact they come in sizes to fit easily between standard framing members.

If you aren't already selling the great new Carey FIRE-GUARD rock wool batt, better line up a supply for your stock right away. Ask your Carey representative to write up your order!

Mail Coupon Today for Free Sample of FIRE-GUARD and Eye-catching Counter Display

THE PHILIP CAREY MFG. CO.
Lockland, Cincinnati 15, Ohio
Department AL-4

Please send me a FREE sample of Carey Fire-Guard rock wool batts and a FREE counter display right away!

NAME_____

COMPANY_____

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Carey

FROM THE HOUSE OF CAREY
Fire-Chex Asbestos-Plastic Shingles
Bathroom Cabinets and Accessories
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Ceramo Glazed Asbestos-Cement Siding
Ventilating Fans
Other Famous Products for Home, Farm and Industry

The Philip Carey Mfg. Company, Lockland, Cincinnati 15, Ohio
In Canada: The Philip Carey Co., Ltd., 277 Duke St., Montreal 3, P. Q.

Perlite

Perlite is a volcanic rock, which when heated quickly to a suitable point in its softening range (about 1800°) expands to form a lightweight, non-combustible, glass-like material of cellular structure. Its weight is about one-tenth of the weight of sand and gravel.

The rock is found in seven southwestern states where it is crushed to sizes suitable for processing. It is then shipped to plants in 35 states for expanding and short haul delivery.

As an aggregate for plaster and concrete instead of sand and gravel, it has many qualities such as sound absorption, high resistance to sharp blows, insulation, fire resistance, high elasticity to resist cracks, low water absorption, and good nail holding power.

Processed perlite is usually marketed in multiwall paper sacks of 4 cubic ft. capacity. It may be stored indefinitely. It may be mixed as an aggregate or filler with other materials without producing any reaction on them. It is white or light gray in color.

Uses

Fill type insulations are normally used for insulating existing buildings. Some are poured in open attics between ceiling joists. Some materials of this type may also be installed by hand packing in irregular spaces. Typical installations are floored or open attics, wood, stucco and brick veneer walls.

Insulating Ceilings with Fill Insulation

Loose fill insulations of the granular or fibrous types may also be poured from bags into the spaces between the ceiling joists to the desired depth, usually four inches.

If a vapor barrier is to be provided it should be installed on the under side of the ceiling joists before the interior finish is applied. The fill insulation will, when installed in accordance with the foregoing procedure, rest directly on the upper surface of the barrier.

Pneumatic Method of Application. The problem of insulating existing buildings with fill insulation is more intricate, due to the lack of access to the hollow spaces in walls and roofs. This is accomplished successfully by blowing nodulated or granulated mineral wool between these spaces. The wool is blown through a hose under pneumatic pressure, the installation being done by applicators equipped with the special apparatus for doing this work. Many lumber dealers own their own blowing machines and do a large and profitable business in this field. Others make mutually satisfactory financial arrangements with specialists and make no investment in such equipment.

The use of a vapor barrier in existing structures is not mandatory, but is a good insurance against housekeeping methods that result in high humidities, such as allowing the drying of laundry indoors, over-use of humidifying apparatus, or permitting damp basements. It is advisable to provide ventilation over ceiling insulation in all cases where high interior humidities would otherwise develop. An efficient vapor barrier may be provided by applying two coats of lead and oil or aluminum paint to the interior plaster surface, but ventilation and control of humidity normally are sufficient. If aluminum paint is used to provide a vapor barrier it can be covered with any type of decoration.

INSULATING AGGREGATES

The development of light weight aggregates has captured the interest of the leading architects and engineers all over the country.

Made from expanded vermiculite and cement or plaster, it is proving to be an insulating as well as a construction material.

When used for floor and roof decks, it serves the construction purpose effectively and insulates as well.

REFLECTIVE INSULATION

Reflective insulation has been in use for many years on both residences and commercial buildings. This type of insulation usually consists of aluminum-coated paper, foil, or polished sheet steel, possessing a high degree of "reflectivity." These products insulate on an entirely different principle than thick, fibrous materials. Their effectiveness is based upon the scientific fact that aluminum or polished metallic surfaces actually reflect the heat radiation which they intercept, thus keeping heat in the home during winter months and out during hot summer weather. The performance of these reflective insulations can be better understood when compared to the well known thermos bottle or electric heater, both of which exemplify the process of heat reflection.

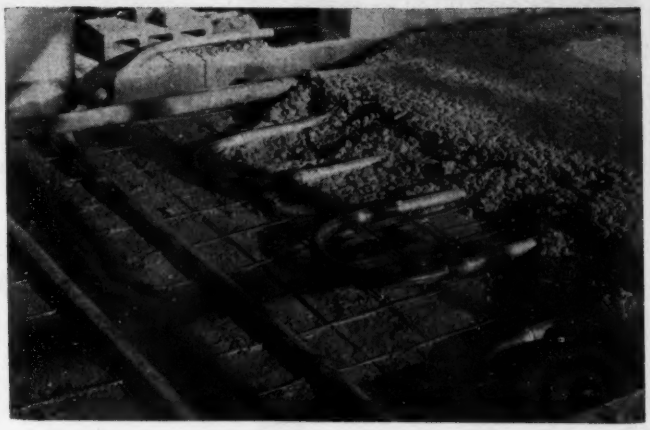
Acts as Insulator and Vapor Barrier

Reflective insulations are highly resistant to the passage of water vapor, hence they perform as a combination insulation and moisture-vapor barrier in guarding against condensation, with its resultant damage to paint, plaster and structure materials. The strength of the product is important from an application standpoint and reflective insulations which are reinforced with sisal or jute fibres may be applied with less risk of damage and tearing. (Intact application is an important feature of good construction, as a break or tear in the material nullifies its function as a protective barrier against vapor.)

Aluminum coated insulations or foils are considered permanent in their efficiency, and thin accumulations of dust have no appreciable effect on the insulating properties of the sheets. This is explained by the fact that heat (infra red rays) can penetrate dust, whereas light, of course, cannot. Other advantages claimed for reflective-

Double Duty!
1. CEILING TILE & PANEL BOARD
2. BLANKET & BATT INSULATION
Reduce application costs!
FOR CEILING TILE
Approved by Insulation Board Manufacturers in applying Ceiling Tile and Panels. The Markwell "L3D" (9/16" leg) Staple is driven flush into the nailing tongue of the tile. The Markwell gun type tacker eliminates damaged edges on tile.
ITS TRIGGER FAST!
"L3" Model loads 84 flat wire Markwell Staples sizes "L3A" (¼" leg), "L3B" (5/16" leg) and "L3D" (9/16" leg).
"L4" Model loads 157 round wire Markwell Staples sizes "L4A" (¼" leg), "L4C" (⅜" leg) and "L4D" (½" leg).
Other Markwell Products
MITRE CUTTERS,
SCREEN WIRE STRETCHERS,
SASH BAR TACKERS,
MOULDING TACKERS.
ORDER NOW FOR IMMEDIATE DELIVERY
Catalogue on request
FOR BLANKET & BATT INSULATION
Trigger action drives staples flush into rafters, joists and studs. A gun type Insulation Tacker eliminates danger of puncturing paper backing on batts and blankets. Use "L3D" Staple in putting up Backer Boards.
MARKWELL
Manufacturing Co., Inc. Industrial Products Division
200 Hudson St., New York 13

REFLECTIVE INSULATION is easily applied directly to the framing members. For best results the insulation should be "bowed-in" slightly between the studs forming two dead air spaces which minimize heat transfer by convection.



LIGHTWEIGHT AGGREGATES have high insulating qualities, both in plaster and concrete. Here a radiant heating coil is laid in a slab of concrete over a layer of lightweight aggregate concrete. Heat is prevented from being lost into the ground.

type insulations are the facts that no moisture is absorbed by the material to reduce its efficiency, nor does it store up latent heat within the material itself, hence it qualifies as an excellent "summer comfort" insulation. Reflective insulations fulfill another important requirement in that they cannot settle, leaving uninsulated gaps at the ceiling level which permit heat loss and cause unsightly dust precipitation or lath marks.

Reflective insulation is used on the back of gypsum board products by some gypsum manufacturers. So used, it gives gypsum board products the same rating for insulation as that of one-half inch insulation board.

Application

The application of reflective insulation is similar to that of flexible blankets or bats, i.e. the insulation is applied between the framing members of a residence. Reflective insulations, however, should be applied either facing, or preferably dividing or "bowed-in" to an air space between the studs or joists, as this creates two so-called dead air spaces which minimize heat transfer by convection, similar to the idea of adding storm sash to the windows.

Reflective insulation should not be sandwiched between sheathing and siding, or imbedded in concrete, as in such positions there would be no opportunity for the material to reflect heat radiation.

ACOUSTICAL MATERIALS

All insulating materials, due to the nature of the materials used in their manufacture, have certain sound deadening qualities. For some specific applications, however, where acoustical qualities are a paramount consideration, it is desirable to install a specially engineered product.

Acoustical materials are made of a variety of materials, most of which have already been described in the coverage of insulating products. Cork, wood and mineral fibre, are perhaps the most commonly used. For a complete description see the Board Section.

HOW TO ESTIMATE THE QUANTITIES OF INSULATION REQUIRED

Sidewalls—Multiply the perimeter of the building by the height of the wall from the top of the foundation to the top of the wall plate to find the total area. Deduct 15 sq. ft. for each single window. Deduct 20 sq. ft. for each door. Divide the net area by the square feet contained in the package of the particular type of insulation used.*

Ceilings—Multiply the width of the ceiling by its length to find the total area. Divide by the square feet contained in the package of insulation used. Make no deductions for areas of chimney or stair well openings.

Attic Rafter and Gables—For quick figuring increase the gross area of the ceiling by 50%. This will provide for the rafter slopes and gable ends.

*1 bag of loose rock wool will cover 16 sq. ft. 3⅝ inches thick.

1 bag of pouring rockwool will cover 20 sq. ft. 3⅝ inches thick.

1 package of 1" roll blanket covers 100 sq. ft.
1 package of 2" roll blanket covers 60 sq. ft.
1 package of 3" roll blanket covers 40 sq. ft.

USE OF FUEL SAVING CHART

A one-story house has a brick veneer exterior wall and neither insulation nor storm sash. What will be the reduction in fuel cost if storm sash and storm doors are added?

Locate the proper page and column for one-story brick veneer construction (column 2). The Relative Fuel Bill for such a house is 104 units per year. Read down the column to the figure opposite "Storm Sash and Storm Doors." This figure, 12, represents the savings from 104 units, or about 11% of the fuel bill.

In the same house (without storm sash or insulation), what savings can be expected from the use of both storm sash and 4-inch blanket ceiling insulation?

From col. 2, add the savings from Storm Sash, 12 units, to the 22 units saving shown opposite "4-inch blanket between joist."

The 34 units total is the saving from 104 units, or about a third of the fuel bill.

A two-story house is to be built with 8"-stone exterior walls. The fuel bill has been estimated at $120 per year. What insulation must be added to reduce this to $60 per year?

The Basic Fuel Bill for such a house (col. 6) is 138 units. If this is reduced by one-half, or 69 units, the desired savings will be reached. Add—Windows and Doors, Storm Sash: 18 units; Ceiling Insulation, 4"-blanket: 13 units; Wall Insulation, 1"-blanket: 45 units. Total: $18 + 13 + 45 = 76$ units, which is satisfactory.

Similarly, other combinations of savings may be added, but in each combination you must limit your choice to only one Window-and-Door Weather-proofing, one Ceiling Insulation, and one Wall Insulation.

Derivation and Use of These Tables

Storm sash and insulation are usually applied only to rooms above the ground level. Hence, weatherproofing the house will reduce the heat-loss of these rooms, but will not affect the heat-loss from the basement. However, the fuel burned will heat the entire house including the basement. The savings of fuel units shown in these tables are based on heating the entire house and correspond more closely to test results than do tables based on calculations in which the basement heat-loss is neglected.

The houses used in the derivation of these tables were a one-story structure 36 ft. by 28 ft. and a two-story structure 28 ft. by 24 ft., each with a full basement. The ceiling height of all rooms was taken to be 8-ft., and the area of windows and doors was assumed to be 15% of the total exterior wall area.

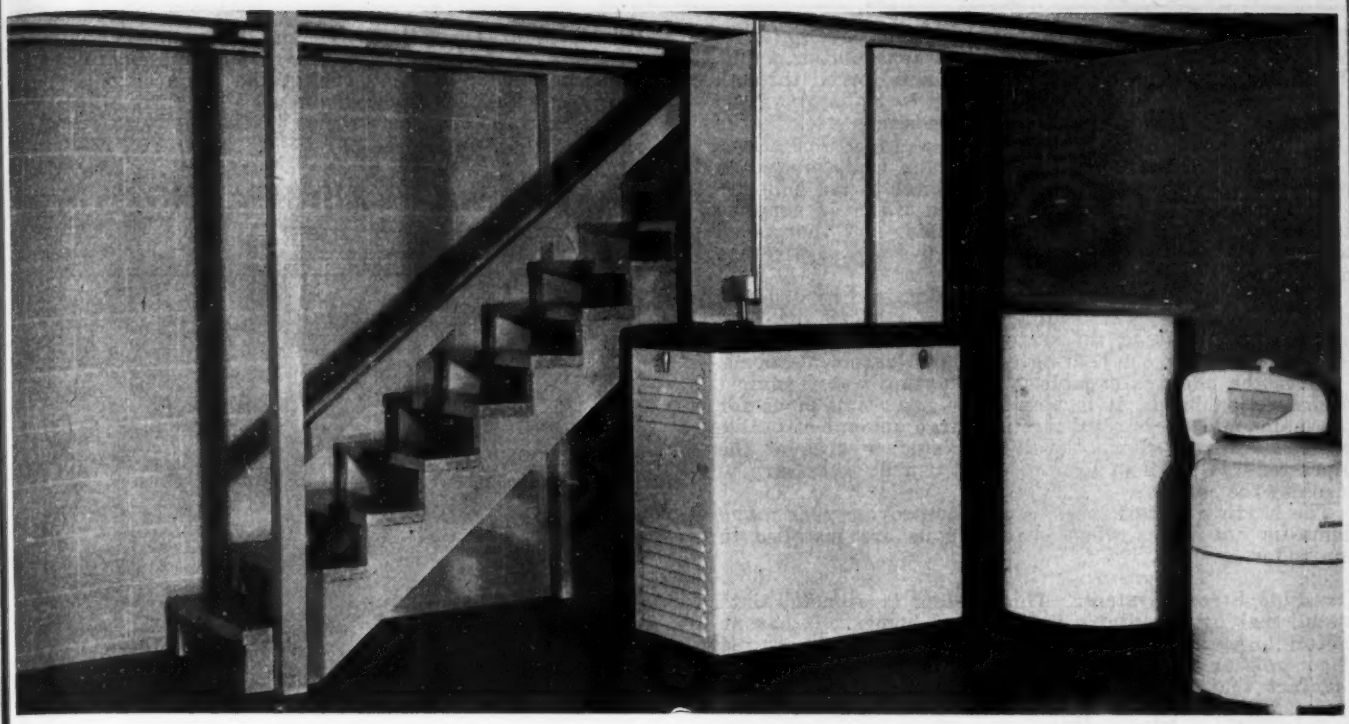
Reductions in Fuel Bill With Use of Storm Sash and Insulation

FOR TYPICAL ONE-STORY HOUSE

	FRAME Wood or Shingle Siding	VENEER Brick or Stucco on Frame	MASONRY Stucco on Tile or Concrete Block	MASONRY Brick and Concrete Block	MASONRY Brick and Concrete	MASONRY Stone 8"
Relative Fuel Bill of Home (without storm sash and insulation)	100	104	107	111	118	126
DESCRIPTION OF WEATHER-PROOFING	NUMBER OF FUEL UNITS SAVED BY WEATHER-PROOFING					
WINDOWS AND DOORS						
1. Weather stripping on all windows and doors	3	3	3	3	3	3
2. Storm sash and storm doors on all openings	12	12	12	12	12	12
3. Weather stripping plus storm sash and doors	12	12	12	12	12	12
CEILING INSULATION						
1. Insul. lath (1/2"). Attic not vented	9	9	9	9	9	9
2. Insul. lath (1"). Attic not vented	14	14	14	14	14	14
3. 1" insul. board over joist. Attic vented	12	12	12	12	12	12
4. 1" insul. board and 1/2" insul. lath vented	15	15	15	15	15	15
5. 2" blanket between joist. Attic vented	18	18	18	18	18	18
6. 4" blanket between joist. Attic vented	22	22	22	22	22	22
WALL INSULATION						
1. Insul. board lath (1/2") with plaster	5	7	9	11	16	21
2. Insul. lath (1/2") with insul. sheathing 25/32"	8	10	..	..	..	..
3. 1" blanket between stud or furring	9	12	15	18	25	31
4. 2" blanket between stud or furring	12	15	18	22	29	36
5. 3 5/8" blanket between stud or furring	13	16	20	24	31	39

FOR TYPICAL TWO-STORY HOUSE

Relative Fuel Bill of Home (without storm sash and insulation)	100	105	111	116	127	138
DESCRIPTION OF WEATHER-PROOFING	NUMBER OF FUEL UNITS SAVED BY WEATHER-PROOFING					
WINDOWS AND DOORS						
1. Weather stripping on all windows and doors	5	5	5	5	5	5
2. Storm sash and storm doors on all openings	18	18	18	18	18	18
3. Weather stripping plus storm sash and doors	18	18	18	18	18	18
CEILING INSULATION						
1. Insul. lath (1/2"). Attic not vented	6	6	6	6	6	6
2. Insul. lath (1"). Attic not vented	8	8	8	8	8	8
3. 1" insul. board over joist. Attic vented	7	7	7	7	7	7
4. 1" insul. board and 1/2" insul. lath vented	9	9	9	9	9	9
5. 2" blanket between joist. Attic vented	11	11	11	11	11	11
6. 4" blanket between joist. Attic vented	13	13	13	13	13	13
WALL INSULATION						
1. Insul. board lath (1/2") with plaster	7	10	13	16	23	30
2. Insul. lath (1/2") with insul. sheathing 25/32"	12	16	..	..	..	..
3. 1" blanket between stud or furring	13	18	22	26	35	45
4. 2" blanket between stud or furring	18	23	28	32	43	53
5. 3 5/8" blanket between stud or furring	19	24	30	35	45	56



Section 13 Heating -- Plumbing -- Ventilating -- Incinerators

Heating Systems

There are seven basic central heating systems available for home heating. Each of these may use coal, oil or gas as fuels. These systems are briefly described as follows:

Gravity Warm Air Systems: This system is economical to install and simple to operate; is well suited to low-cost houses. It is responsive to rapid changes in heating demand and is particularly adapted to a house of compact design.

Principles of Operation: Air circulation in this system depends upon the fact that cold air is heavier than warm air. The cooler air in the room flows downward through return air intakes located in first floor rooms to return air ducts which lead it to the bottom of the furnace casing.

Inside this casing, the air contacts the heated surfaces of the furnace and as it becomes warmer and lighter in weight, it rises and flows out through leader pipes to warm air registers in first floor rooms, or through risers to registers in upstairs rooms.

In this installation all leader pipes should be as nearly equal in length as possible; and both leader pipes and return air ducts should be as short as possible. To achieve this the furnace must be centrally located and the leader pipes must slope upward to the registers or risers.

These factors tend to reduce the amount of usable basement area. Also, since the furnace must be below the level of the rooms to be heated, this system is not suited to a basementless house.

The air may be humidified from an evaporating pan inside the furnace casing. Filters, however, are not used, since they tend to restrict the flow of air.

The system can use an automatic feed or hand feed coal furnace, or an oil or gas burner.

Forced Warm Air System: This system is characterized by its very rapid response to changes in heating demand. It usually costs more to install than the gravity system, but is adapted to larger structures, with or without basement.

Principles of Operation: Positive, controlled air circulation is maintained by a fan or blower. This blower draws the cooler air from the rooms through return air intakes and through an air filter, then delivers it under pressure into the space between the furnace and the furnace casing. Here it absorbs heat from the heated surfaces and passes through the warm air ducts to registers located in the rooms. Since a positive circulation is maintained by the blower, the air ducts can be much longer and somewhat smaller than those in a gravity system.

Moisture is added to the air by a humidifier.

Registers can be located in the ceiling, low or high in the sidewall, in the baseboard, or floor.

The system is not readily usable for summer air conditioning without the addition of cooling coils and cooling equipment, together with provision for a larger capacity blower. If controlled ventilation is desired, a duct leading to the out-of-doors must be provided.

Gravity Hot-Water System: This system is also economical to install as it requires a minimum of special fittings or devices. It has no electrical connections other than those required if controls and burners are used.

Principles of Operation: Circulation in this system depends upon the fact that cold water is heavier than warm water. The cooler water flows downward through return risers and mains to the bottom of the boiler. Inside the boiler the water is heated and as it becomes warmer and lighter in weight, it rises and flows out through the supply mains to the radiators in the rooms.

Since the circulation is by gravity action, the supply and return mains must be large in order to reduce friction. The mains should be insulated to prevent excessive heat loss into the basement. Since the boiler must be located below the level of the radiators, the system is not suited to a basementless house, or the heating of isolated basement rooms.

The system is somewhat slower in responding to temperature changes than a forced hot water system, due to the larger volume of water retained in the pipes and radiators. It may be operated either as an "open" or "closed" system. In the former, the expansion tank is located above the highest radiator and the water is "open" or exposed to the air. In the closed or pressure system (shown in diagram), the expansion tank may be located near the boiler and as the heated water expands, the air in the tank is compressed.

Since an increase in pressure raises the boiling point of the water, higher temperatures may be maintained without forming steam in the radiators. These higher temperatures permit the use of radiators smaller than those needed for the open system.

Forced Hot-Water System: This system is also characterized by its rapid response to changes in heating demand. The radiator temperatures may be modulated or varied in accordance with changing weather so that uniform air temperatures are maintained.

Principles of Operation: The circulation of water is positively maintained by the action of a circulation pump. The water is heated in the boiler and is forced through the pipes (mains and risers) leading to radiators. Two basic types of piping systems are in common use. In the One-Pipe system (shown in diagram) a single pipe serves both to supply the heated water to the radiator and to return the cooler water from the radiator to the boiler.

In the Two-Pipe system the heated water is supplied to the radiator through a supply main, and the cooled water is returned to the boiler through a separate return main.

Since the circulation of water is maintained by a pump, radiators may be located either above or below the level of the boiler, making the system adaptable to basementless houses and to the heating of isolated basement rooms.

Since the pump is capable of circulating water against high friction heads, it is possible to use small pipes for the mains and risers resulting in a large amount of usable basement space. Since the smaller surface area of the pipes reduces the heat loss, it is not usually necessary to insulate the mains.

The heating system may be used to provide year-round domestic hot water when heating coils are installed in the boiler.

One-Pipe Steam System: This system is economical to install making it suitable for low-cost homes. It has no motors or electrical connections other than those required if controls or burners are used. The disadvantage lies in the fact that heat cannot be modulated or varied. The steam must be all on or all off, in order to prevent the radiators from filling with water. Hence the system is not as responsive to changing demands as the two-pipe steam or hot water systems.

Principles of Operation: Steam is generated in the boiler and as it rises through the single main and individual risers to the radiators, it forces the air out of the system through air valves or vents located on each radiator and at the end of the main.

The steam is condensed in the radiators, and the water or condensate is returned to the boiler through the same pipes. Since both steam and water are present in the main, the pipes must be somewhat larger than those of other boiler systems, and the slope or pitch must be very accurately maintained in order to avoid water pockets and "hammer" or pounding in the mains.

The boiler must be located below the level of the rooms to be heated, so it is not suited to a basementless house.

If heating coils are installed in the boiler, domestic hot water may be obtained from the heating system all year round.

Two-Pipe Steam or Vapor System: This system requires special traps or valves as well as separate supply and return mains. It is extensively used in larger homes and commercial buildings and usually costs more to install than the one-pipe steam or the hot water systems.

Principles of Operation: Steam generated in the boiler rises through supply mains and risers to the radiators, forcing the air in the system through thermostatic traps which are located at the radiator outlets. These traps are designed to pass the air and water but not the steam, into return mains where they proceed to an air eliminator which expels the air through a vent and allows the water to return to the boiler. In this way the air may be kept out of the system for a number of hours, and the boiler may generate steam (vapor) in a partial vacuum, with a correspondingly reduced steam temperature.

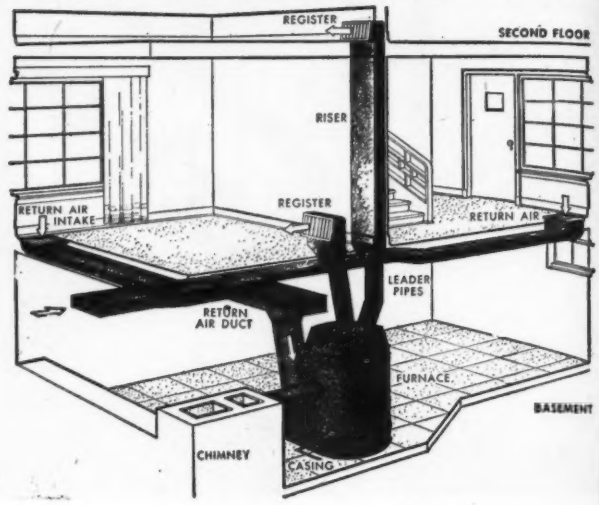
Since there are separate supply and return mains, the supply valve can be partly opened without the danger of having the radiator fill with water. Thus, in this system, there are two points at which the temperature may be controlled: 1) The boiler, where a variation in steam temperature is possible, and 2) the radiator, where the amount of steam admitted can be varied.

The system is not suited to a basementless house, or to the heating of isolated basement rooms without the addition of a condensation pump which returns the condensed steam to the boiler, or a vacuum pump which maintains reduced pressures in the system.

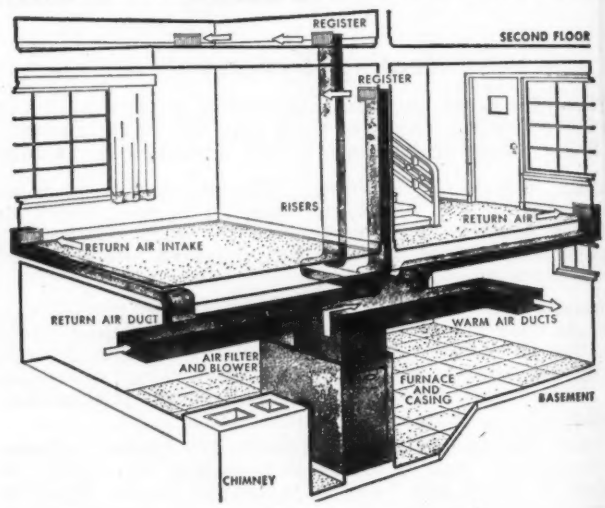
Panel Type System: The panel system is well adapted to a basementless house. It usually costs somewhat more than the conventional systems since the house must be specially designed for the heating plant.

Principles of Operation: In this system, the building structure itself is heated directly with pipe coils or with warm air ducts located beneath the surfaces of ceiling, floor, or wall. The heated surfaces, in turn, warm the objects and the air in the rooms. Either hot water, steam, or warm air may be used.

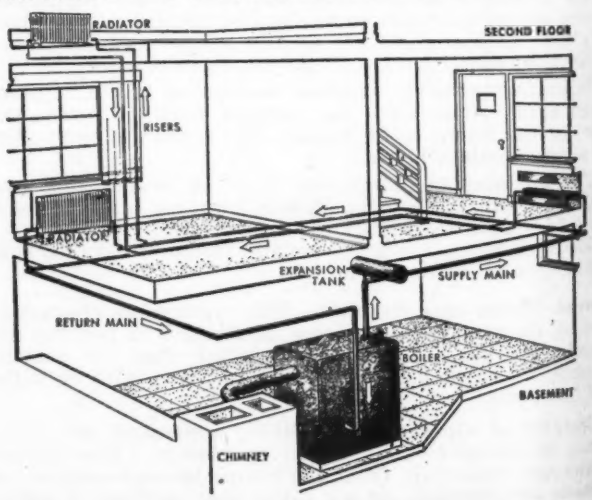
GRAVITY WARM-AIR HEATING SYSTEM



FORCED WARM-AIR HEATING SYSTEM

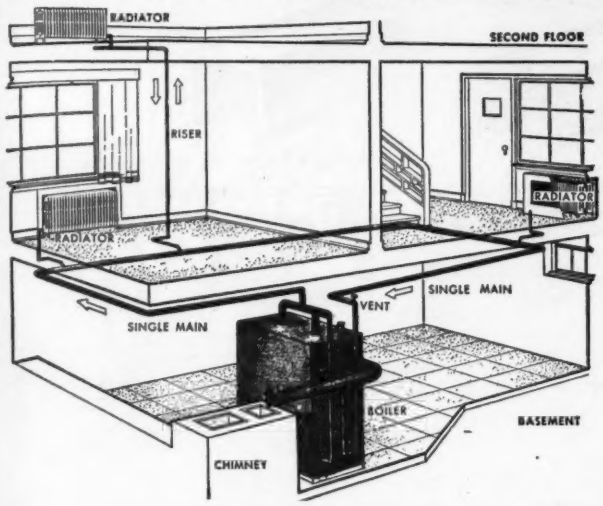


GRAVITY HOT-WATER HEATING SYSTEM

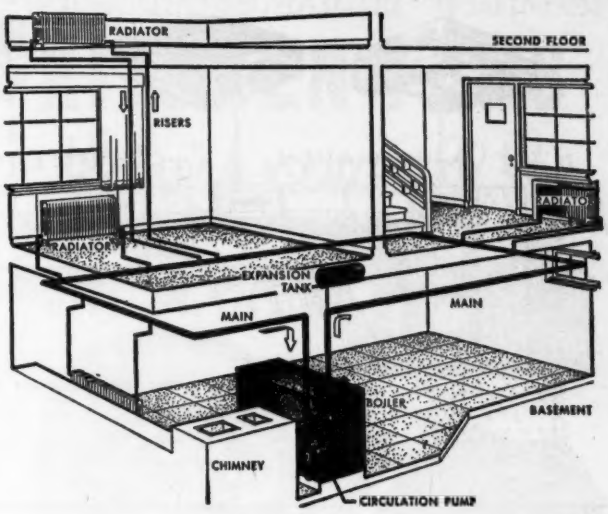


ON THIS page and the next are illustrated the seven principal types of home heating systems. Each drawing shows the main features of the system it describes but is not a detailed installation guide.

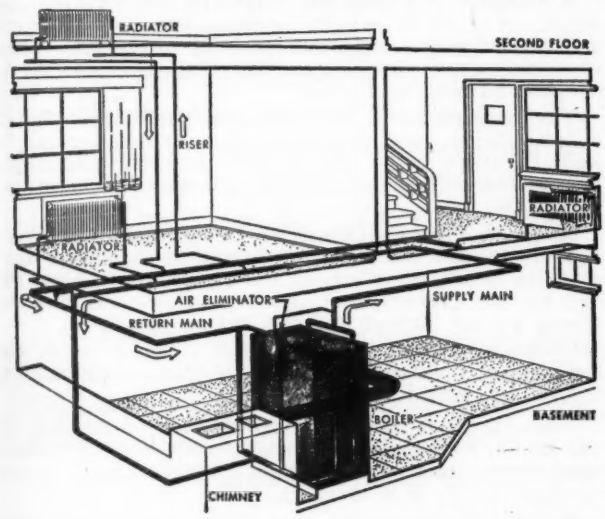
ONE-PIPE STEAM HEATING SYSTEM



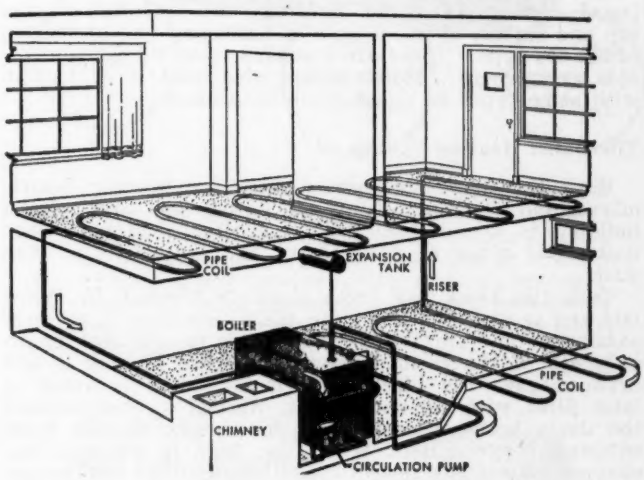
FORCED HOT-WATER HEATING SYSTEM



TWO-PIPE STEAM OR VAPOR SYSTEM



PANEL HEATING SYSTEM



With a panel system there are no heating units such as radiators or registers visible in the living quarters. Buildings are designed for maximum temperatures of 85 degrees for floors, and approximately 115 degrees for sidewalls or ceilings. The actual air temperatures required for comfort are close to 70 degrees.

In the true radiant heating system, heat is "radiated" from glowing surfaces such as electrical coils whose temperatures are 1200 degrees or higher. In such a system heat is localized and the heating elements must be carefully placed in order to avoid "hot spots." The air temperature may be maintained well below 70 degrees and still permit the direct radiation to provide comfort.

Baseboard Heating Systems: About 23 years ago Prof. A. C. Willard, then head of the Department of Mechanical Engineering, University of Illinois, and several of his associates made a study of the effect of radiator shape and size on heat distribution in rooms.

The results directed the attention of the heating industry to the advantages of a source of heat at the floor level. It was found that low radiators produced greater comfort because they directed more of the heat to the lower or occupied section of a room.

Baseboard heating equipment now available is of two general types with respect to material. One is ferrous cast iron type. In its simplest form this is a radiant baseboard, one that gives off most of its heat by radiation. It is known as type "R." It is a hollow cast iron unit which resembles a conventional wooden baseboard in appearance.

Cast iron baseboard units are also offered in the "RC" type which is designed for those rooms where the "R" does not offer sufficient heating capacity. Type "RC" combines the radiant cast iron with fins at the back so as to provide heat by both radiation and convection, thus making it possible to get a larger amount of heat per lineal foot of baseboard.

The second type of baseboard heating is made in two forms, using respectively steel pipe with steel fins or copper pipe with copper or aluminum fins. All of the latter types deliver heat by convection, due to air passing over the fins, and by radiant effect due to the heated metal enclosure surface.

Baseboard heating cannot be used satisfactorily with pipe or two pipe hot water heating systems. The use of a circulator is recommended although there are two-pipe gravity systems in operation. Conventional control systems may be utilized. For best results, boiler water temperature should not exceed approximately 210 degrees in order that the temperature of the water in the baseboard will not be over 200 degrees.

Base board heating cannot be used satisfactorily with one-pipe steam jobs, but is entirely satisfactory with two-pipe steam or vapor.

Simplicity of installation is one of the features which accounts for the growing popularity of baseboard heating. On modernization work all the contractor has to do is remove the wooden baseboard and install the baseboard heating unit in its place. In some cases, it may be practical and desirable to install the baseboard heating equipment right over the existing wooden baseboard.

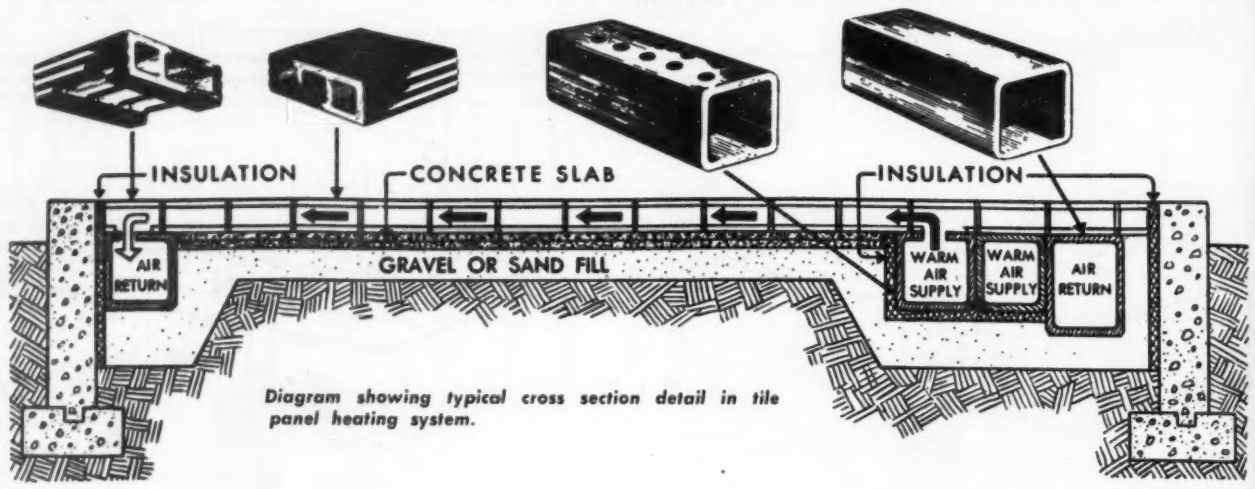


Diagram showing typical cross section detail in tile panel heating system.

To compensate for irregularities sometimes found in walls and floors and to provide an even more realistic baseboard appearance, wood moldings are installed at the top and bottom of the R type of baseboard and at the top of the RC type. These are standard wood moldings available everywhere. Moldings are also used in connection with some types of non-ferrous baseboards.

Tile Panel Heating System

With this new developed system for heating homes, offices, and other structures the entire floor area of the building is a radiator. This is accomplished with four units; two types of floor blocks and two types of clay duct.

Each tile block has three channels through it. When laid end to end as a floor, the tile blocks line up to form continuous and uninterrupted channels for the full length or width of the room. A space of about ⅝ inch is left between each tile block when it is laid. This space is later filled with cement mortar. Special sleeves connect the ducts between each block to prevent mortar from entering the channels. When the floor is finished, the channels form a "closed type" system. No air enters the room.

Forced warm air from the heating unit is carried to the floor ducts through larger clay supply ducts laid beneath the floor. This warm air flows through the channels in the floor blocks and enters return ducts which carry it back to the heating system for reheating and re-circulation. This is illustrated in the simplified schematic drawing at the bottom of this page.

Space Heaters: There is a wide variety of individual-unit space heaters on the market today. All are designed as self-contained heating plants, and their function is to provide heat within a limited area.

The available types work both on the principle of direct radiation and forced air, the latter type being extensively used in modern factories and similar commercial buildings. They are made to utilize oil, gas, coal, and electricity as fuel.

Demand for this type heating unit is greatest in areas where the winters are mild, and where heating demands are not constant or severe for prolonged periods.

Many building products dealers handle this equipment and find that there is a steady and satisfactory volume of business from it.

The heat pump, costing around $2,000, is luxury equipment for most householders. The principle is basically the same as that employed by the electric refrigerator, offering an automatic method of heating in cold weather and cooling in the summer. Water is the source of the initial heat used by the pump. The compressor is powered by electricity.

Solar heating, experimental studies have revealed, will heat a house under certain conditions. However, since the period when the sun shines is limited, some auxiliary method of heating also must be provided.

CHIMNEYS

A chimney is a necessity with any fuel-burning equipment. It must be capable of producing and maintaining a draft to bring a supply of fresh air to the fire. It must also carry away particles and harmful gases emitted from the fuel-burning equipment.

The passages through which these gases travel is called a flue. The flue and the entire chimney must be carefully built in order to be free of fire hazards. Defective or overheated chimneys form the greatest single cause of residential fires.

Masonry chimneys must be free standing—giving no support to, and receiving none from the house. A cap of stone or concrete on top of the chimney will shed water and thereby preserve the masonry below. The flue lining should extend through the cap and project above it.

Chimneys should extend at least 2 feet 6 inches above the highest point of the house so that air currents will not be deflected down into the flue.

Where there is more than one flue in the chimney, each flue should be entirely separated from the others, with no cross-connections between them. Brick spacers separate the flue linings in a chimney.

Flue linings are built ahead of the construction of the chimney and the brickwork is laid-up around the lining. Joints must be bedded in mortar or fire clay.

The flue for the heating plant is favored in every way. It is always provided with a flue of its own.

Prefabricated Chimneys: There are several types of prefabricated chimney units on the market. They require no masonry protection or concrete footings, and are approved by the Underwriter's Laboratories, Inc.

Prefabricated or precast chimneys are supplied in sections, may be suspended from the framing members of a structure. Consequently they require less space than a conventional chimney.

One type consists of a double metal wall, with the space between filled with insulation. Another, approved for use as a flue with gas heat only, has a single wall of asbestos cement.

A popular type, adaptable to both new and existing homes and farm buildings, consists of a metal case within which a tile flue is held by a layer of vermiculite concrete. This unit is extremely light in weight.

WALL AND RECESSED HEATERS

A comparatively new development in the field of home heating is the wall and floor unit heaters. These complete units, using oil, gas, electricity as fuel, are recessed between studs or floor joists.

Most are actuated by means of thermostatic controls which procide a constant and dependable heat, at whatever temperature is selected.

Those folks who bought an old house and are "fixing it up themselves" . . . that young couple who have decided to spruce up the basement . . . that chap who dropped in to inquire about some pine paneling . . . ever stop to think how open they are to suggestions of other modernizing accessories besides lumber?

Like *FASCO automatic window ventilators, for instance.* Keep kitchens cooking-odor free. Whisk steam and humidity out of bathrooms and laundries. Pay for themselves in no time just in savings on decorating.

Make it a habit to suggest FASCO Ventilators to every remodeling customer. You haven't a thing to lose—and you stand to profit from that fair percentage who'll answer, "Say, that's pretty clever—I'd be interested in one of those."

Wall Ventilator for outside walls

"Ceil-N-Wall" for ceilings or inside walls

FASCO Industries, Inc.

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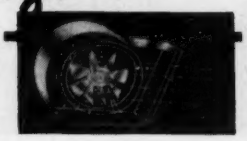
BERNS AIR KING KITCHEN FANS

they're new—all the way through!

BLOWER TYPE FAN BLADE

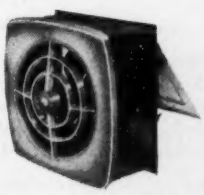


Every feature you've ever wanted in a kitchen fan! New BLOWER-TYPE BLADE maintains constant high volume in long ducts . . . prevents motor burnouts due to clogging of ducts. Extremely powerful yet so quiet as to be practically unnoticeable. Chrome or White Enamel grille removable merely by unscrewing handy center knob. Frame mounts between 16" studs or center joists. Outside zinc frame will never warp or rust. Complete 3-speed control switch available at $5.95 list.
10" model. List, incl. excise tax..... **$34.95**

NO RODS or CHAINS!

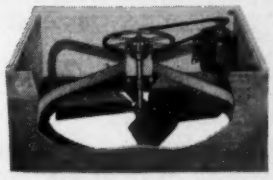
Wall Switch Controlled

SIDE WALL MODEL



Flick of the switch starts and stops motor, opens and closes outside door. Same grille and construction features as ceiling model. Motor and blade completely removable by merely loosening two screws. Air tight, rubber lined, outside steel door with all zinc outer frame. 10" model for 5½" to 16" wall widths.
List, incl. excise tax..... **$55.40**

Pull Chain Model also available with all above features. In 8" models for 5" to 15¾" wall widths—list, incl. excise tax, **$27.55.**
10" model for 5½" to 16" wall widths, list incl. excise tax. . **$34.60**



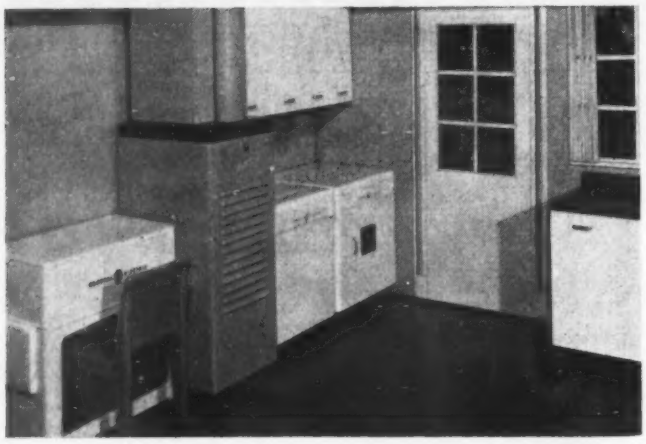
NEW Packaged Ceiling Fan

Ready for installation right in its own "built-in" frame where minimum height doesn't permit usual attic fan. Sealed for life shaft bearings set in solid rubber for extreme quiet . . . sealed lubrication, ball bearing motor. In 24" to 42" models . . . list price as low as **$110.00** incl. excise tax. Shutters optional and extra.

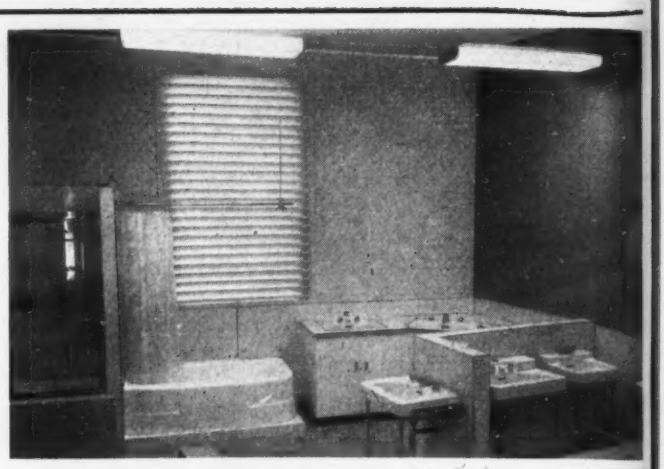
Available through leading Electrical Wholesalers everywhere. Or write for descriptive literature to . . .

BERNS MFG. CORPORATION

3050 NORTH ROCKWELL STREET, CHICAGO 18, ILLINOIS



COMPACT and streamlined furnaces are becoming an attractive part of the modern utility room in basementless houses. Installed in this manner the units are readily accessible for convenient servicing.



PLUMBING fixtures require a minimum of space in the dealer showroom and their beauty encourages many profitable sales. Both cabinet and more conventional bathroom fixtures are shown in this display.

A strict set of standards have been established for gas heaters of this type by the American Gas Association. In order to meet the approval of this organization the heaters must meet all of the fire hazard tests and other requirements set forth for central heating systems.

This type of heating unit gained first popularity in milder regions of the country, where heating requirements are not so heavy. It is found in a high percentage of homes in these sections. However, by installing a series of the heaters throughout a dwelling, comfortable and efficient heating can be maintained in any climate.

One advantage of these independent units is that various controlled temperatures may be maintained throughout a house. For example, a constant lower temperature may be held in the bedrooms, while a higher temperature is set in the other rooms of the house.

These units do not depend on leads and returns for proper heat circulation.

SPACE HEATERS

Space heaters are portable or semi-portable heating units, fueled by oil, gas, coal, or electricity. Their primary use, aside from the semi-portable types, is as a supplemental unit to the central system, or in areas where only limited heat is needed infrequently for comfort.

Most of the portable types come under the broad classification of small appliances, and are generally electric. They are manufactured in various sizes, with capacities ranging from a small area to an entire room.

Plumbing

Plumbing is customarily divided into three parts—the fixtures, the water supply system and the sewage disposal system.

Through the water supply system the house is booted up with an outside source of water supply, either a private or public utility.

Through the sewage-disposal system, the refuse of bath and kitchen flows to the city sewage system or a private septic tank.

Because labor and roughing in materials account for nearly two-thirds of the cost of plumbing in a house, it is possible for the dealer to supply two bathrooms for less than twice the cost of one.

Laying Out Plumbing System

Two considerations should control the layout of a plumbing system: (1) the inclusion of the necessary fixtures for bathroom and kitchen served by an adequate drainage and hot-and-cold water system; (2) a special effort to make the plumbing installation economical by concentration of the location of fixtures.

For greatest economy, it is desirable in one-story houses to plan the kitchen and bathroom as adjoining rooms, but with sufficient space in the separating wall to carry the necessary plumbing lines. Through this combination of rooms and by placing the fixtures in the adjoining rooms along the common wall, only one vent stack is required for all the fixtures, and the lengths of drainage and water lines are reduced to a minimum.

In two-story houses it is desirable to have the plumbing fixtures on the second floor located over the fixtures on the first floor, so as to assure a concentration of mechanical equipment, minimizing drainage and water lines and permitting a single vent stack.

In small dwellings at least one laundry tray should be provided. In the case of one-story houses, due to space limitations, it may be advisable to include the laundry tray in the kitchen in combination with the sink. In two-story houses, where more utility space is provided, a double laundry tray should be located in the utility room as near the kitchen plumbing as possible.

With the exception of the water closet which should be of vitreous china, the plumbing fixtures should be either cast iron or pressed steel with an acid-resistant porcelain enamel finish. The fixture fittings should be of good quality, of a type which can be easily repaired or replaced. Chromium finish on fittings and exposed pipe is desirable, due to its high resistance to corrosion.

Water Closet Bowls

There are three major types of water-closet bowls: the siphon jet, the reverse trap and the washdown. The siphon jet, because of its deeper water seal, its larger trapway and its very large water area, is preferred. Since dirt does not stick to a wet China surface, a large amount of water area is an advantage.

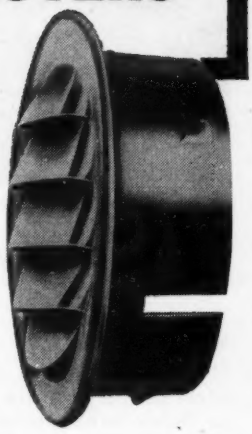
The reverse trap bowl is an intermediate bowl. It has a medium size water area, an integral flushing rim and jet and a minimum water seal of 2½ inches.

The oldest and most competitive type is the washdown bowl. The minimum area of its water surface is 8x7 inches. It has a trapway and depth of seal about the same as the reverse trap and the exterior styling is largely utilitarian. Any of these types of water closets may be used in connection with a tank or a flush valve.

Drainage system—the house drainage system should consist of a main trap with a fresh-air intake on the house side of the main trap running to the outside of the house, either with an inverted U or a screened wall vent. The placement of the fresh-air intake under any window or adjacent to a door should be avoided. The main house drain stock should extend above the roof not less than 1 foot. A main vent pipe should be connected to the stack below the lowest fixture and carried up to a point above the highest fixture where it may again enter the stack or pass through the roof separately. Each fixture should be individually vented into the main vent.

Attention to the following points will insure a durable, adequate drainage system: (1) High quality of materials

GIVE CONDENSATION THE AIR with "MIDGET LOUVERS"



Efficient sidewall ventilation for new or old structures! Helps prevent condensation and moisture blistering. Easy to install. 2 styles—for indoor or outdoor use—both with built-in insect screens. All-aluminum. 5 sizes—1" to 4".

Use on sidewalls, flat roofs, eaves and soffits, gables, unexcavated areas, finished basement walls, cupboards, closets, storm sash, etc. Write for information.

THE MIDGET LOUVER CO.

6-8 WALL STREET • NORWALK, CONN.

ACKNOWLEDGMENTS

The associations and companies below provided substantial editorial contributions which greatly improved the scope of this issue of the Dealer Products File.

•

Metal Window Institute

Aluminum Window Manufacturers Assn.

Insulation Board Institute

National Woodwork Manufacturers Assn.

Minnesota Mining & Mfg. Co.

The Donley Bros. Co.

Moe Light Inc.

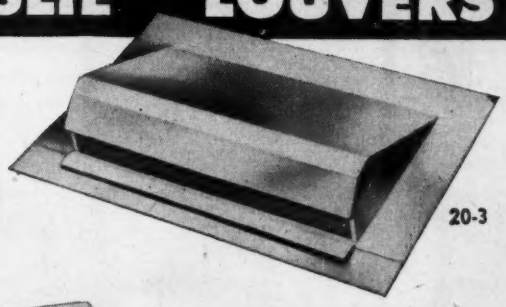
Rilco Laminated Products Inc.

University of Illinois Small Homes Council

Masonite Corporation

LESLIE LOUVERS

SLANT ROOF TYPE



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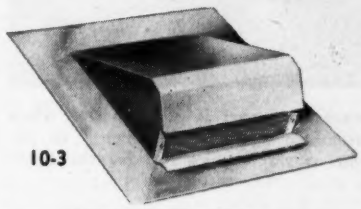
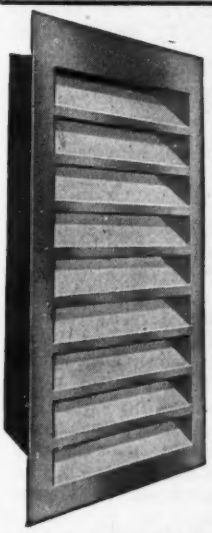


10-3

- The original and *still* the best Slant Roof Louver.
- Patented Baffle and Drip Cap keeps out snow, rain.

	Opening Size	Area of Air Duct Opening
ALUMINUM VENT (Aluminum Screen)	SRA 10-3	30
	SRA 20-3	60
GALVANIZED STEEL VENT (Bronze Screen)	SR 10-3	30
	SR 20-3	60

FLUSH FLANGE TYPE

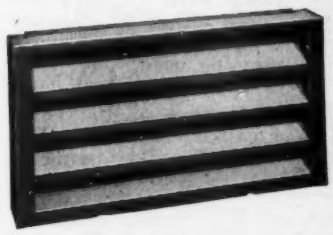


Opening Size Width	Height	ALUMINUM Alum. Screen	GALVANIZED STEEL Galv. Screen
8	8	VFA 8- 8	VF 8- 8
8	12	VFA 8-12	VF 8-12
8	16	VFA 8-16	VF 8-16
12	8	VFA 12- 8	VF 12- 8
12	12	VFA 12-12	VF 12-12
12	18	VFA 12-18	VF 12-18
12	24	VFA 12-24	VF 12-24
14	8	VFA 14- 8	VF 14- 8
14	24	VFA 14-24	VF 14-24
18	18	VFA 18-18	VF 18-18
18	24	VFA 18-24	VF 18-24
24	8	VFA 24- 8	VF 24- 8
24	24	VFA 24-24	VF 24-24
24	30	VFA 24-30	VF 24-30

Other sizes can be made to your specifications.

SELF-FRAMING TYPE

Opening Size Width	Height	GALVANIZED STEEL Galv. Screen	ALUMINUM Alum. Screen
8	8	VB 8- 8	VBA 8- 8
8	12	VB 8-12	VBA 8-12
8	16	VB 8-16	VBA 8-16
12	12	VB 12-12	VBA 12-12
12	18	VB 12-18	VBA 12-18



LESLIE FOUNDATION VENT

- 16" x 8" concrete block size
- Rigid Frame channels
- Galvanized steel with galvanized screen

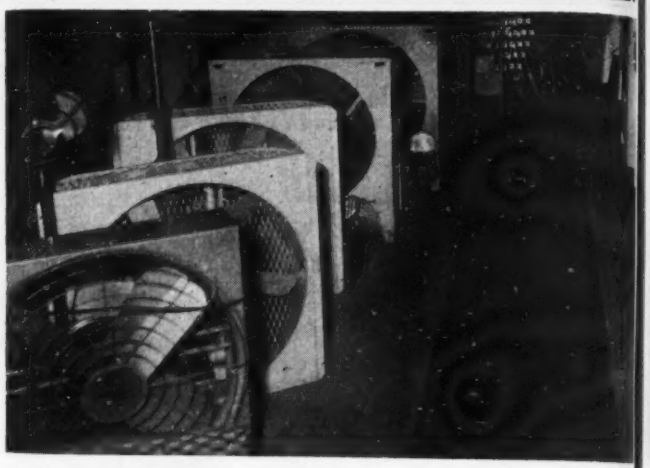
Immediate Delivery—Write Today For Complete Information

SEE OUR CATALOG IN SWEET'S

LESLIE WELDING CO.

2940 W. Carroll Ave., Chicago, Ill.

PACKAGE SELLING of a complete bathroom is much easier when everything is shown in an assembled room arrangement. In the photograph above the dealer has a single price tag for the bathroom, floor and wall coverings.



HOME VENTILATION is rapidly assuming a position of general specification in modern homes. An attic fan ventilator can reduce internal temperatures substantially with a corresponding increase in living comfort.

and workmanship. (2) well calked and sealed joints, (3) proper sizing of drainage and vent piping, (3) individual venting of fixtures, (5) proper pitching of mains and branches, (6) clean-out facilities at bends in drainage piping, (7) proper traps.

In localities where neither water supply nor sewage utilities are available private utilities may be required. These would ordinarily consist of:

1. Sewage disposal system, involving the use of a septic tank and tile field.
2. A water-supply system with pump and storage tank for either shallow or deep well.

Sewage disposal—The problem of private sewage disposal is one which must be very carefully handled due to danger of pollution of water supply. Good practice dictates that: (1) septic tank should be water tight and of durable construction; (2) septic tank should not ordinarily be located on a lot of less than 5,000 square feet in area, and, when combined with a well, additional precaution must be taken to avoid the possibility of contamination of the well; (3) tile field should be laid out after checking carefully the rate of absorption of the soil and the number of occupants; (4) lay-out of tile field should be carefully checked in relation to the general terrain, elevation and slope to water supply; (5) a septic tank of less than 300 gallons capacity should not be used.

Home water supply—For home water supply, the source of water should be carefully checked against possible pollution. The vertical distance between the level of the water in the well or other source to the location of the pumping plant must be determined, in order to select the proper type of equipment. If this vertical distance is 22 feet or less, the equipment will be classed as "shallow well." If this vertical distance is more than 22 feet, the equipment will be classed as "deep well." Unit home pumping plants are available powered either by gasoline engines or electric motors. In case electriicty is not available, the gasoline-powered unit may be used.

Important considerations in installations of the home pumping plant are: (1) good workmanship in installation, (2) high quality materials, (3) avoidance of trapping in any lines, (4) well-lubricated and well-packed pump, (5) adequate storage tank.

Extreme care must be exercised in the design and location of wells and sewage disposal plants, especially when both occur on the same plot.

The domestic demand for hot water quantity has been stepped up by two comparative newcomers in the home appliance field—the automatic clothes washer and the automatic dishwasher. One way to find out the water heating capacity of several units being considered is to learn the number of gallons the water heater can deliver in any two hours, starting with a full tank.

Water Heaters

Many of the new automatic water heaters are equipped with a temperature dial which the owner can operate as he does his radio dial, setting the thermostat at any degree he wants—all the way from 100 up to 180 degrees.

Qualities to consider in judging a water heater are all-around choice of materials, workmanship, temperature control and storage tank facilities.

Installation is the fifth important guidepost in selecting an automatic water heater. Many first-class water heaters do not give top service because of poor installation. The heater should be placed as close as possible to the most-used faucet, which is usually the kitchen faucet. The purpose is to make the pipe run as short as possible and save water and fuel.

Ventilating

Attic ventilation is a means of drawing air from the out-of-doors through the home and exhausting the air from an attic space, cooling the home throughout during this process. Proper installation of the attic fan will change the air in the entire house. With a properly installed fan, the windows in the downstairs rooms may be opened after sundown, the fan started, and the air from the out-of-doors pulled through the entire house.

Attic fans can also be used for daytime cooling. Where homes have basements, the upstairs windows may be closed, basement windows left open with the door leading to the basement also open. The basement air can be drawn through the house, cooling the home.

In addition, the fan can be used to flush the house of smoke or odors with or without the windows open. When there is a fireplace in the house, the fan should never be used while windows or doors are closed without first making sure that the fireplace chimney damper is also closed. The fan should never be used when the fire is going without windows being opened.

The size of the fan selected will depend on the size of the home and its geographical location. For example, in the northern and central parts of the United States, the fan should be capable of moving the air out of the living quarters (not the basement or attic) every two minutes. This is known as a two-minute air change. In the southern states it is desirable to have a one or one-and-a-half minute air change.

Automatic control by means of a time clock will shut off the fan at a predetermined time, usually in the early morning hours.

Louvres, incidentally, are an essential part of all attic construction, whether the space is utilized as a part of the home or not. They provide a circulation of air between the ceiling and rafters, and prevent excessive heat build-up in that area when the roof is subjected to direct summer sunlight.

Louvres, therefore, are an essential item of merchandise for the building products dealer.

TABLE OF INCINERATOR SIZES, EQUIPMENT AND DATA

For Receiving Hopper Door and Flue Sizes, See Separate Section at Bottom of Page

Incinerator No.	Recommended Use	Incinerator Dimensions					Incinerator Equipment				Brick Required to Build (Including 5% Allowance for Waste)			
		Outside Dimensions of Brickwork		Inside of Combustion Chamber		Height Outside	Number and Size of Grates	Size of Fire Door	Size of Ash Door	Ship. Wt. Lbs.	Based on Wall		Common Brick	Firebrick
		A	B	C	D	E					Thickness	Height		
24	Res. 5 to 7 Rooms	36½"	36½"	18½"	18½"	6'6" to 7'2"	1–15½x15½"	14x11"	14"x11"	110	9"	7'0"	550	340
35	Res. 5 to 10 Rooms	40¾"	41"	22¾"	23"	6'6" to 7'6"	2–9½x20"	14x11"	14"x11"	185	9"	7'0"	675	380
45	Res. 8 to 14 Rooms Apts. to 18 Rooms	52¾"	36½"	34¾"	18½"	6'6" to 7'6"	2–15½x15½"	14x11"	14"x11"	195	9"	7'0"	765	430
68	Large Residences Apts. 18 to 40 Rooms	50¼"	48¼"	32¼"	30¼"	6'6" to 8'2"	2–14¼x27¼"	18x14"	14"x11"	278	9"	8'0"	980	575
86	Apts. 40 to 80 Rooms Hosp. under 50 Beds Schools under 300 Students Small Stores under 6 Group	53¾"	52¾"	35¾"	34¾"	6'6" to 8'2"	2–16x31¾"	18x14"	14"x11"	375	9"	8'0"	1080	640
99	Apts. 80 to 120 Rooms Hosp. 50 to 90 Beds Schools 300–500 Students Small Stores 6–8 Group	65½"	48¼"	47½"	30¼"	6'6" to 8'2"	3–14¼x27¼"	22x17"	14"x11"	470	9"	8'0"	1160	682
127	Apts. 120 to 200 Rooms Hosp. 90 to 160 Beds Schools 500 to 800 Students Small Stores 8–12 Group	78¾"	60¾"	52¾"	34¾"	7'0" to 8'6"	3–16x31¾"	22x17"	2–14x11"	665	13"	8'0"	2480	810
167	Apts. 160 to 300 Rooms Hosp. 160 to 240 Beds Schools 800 to 1200 Students Small Stores 12–18 Group	95¾"	60¾"	69¾"	34¾"	7'0" to 8'6"	4–16x31¾"	30x24"	2–14x11"	855	13"	8'0"	2840	926

The table above gives the dimensions of eight popular-make incinerators. In this manufacturer's system, the stock number indicates the approximate grate area. Thus, number 24 has a grate area of 24 sq. ft. In figuring capacity, one cubic foot equals .809 bushels.

*Where excessive heat is liable, the thickness of the walls should be increased four inches.

Incinerators

Incinerators available include sizes for residences, apartment houses and medium-sized industrial plants. Another type, growing quite popular, is a prefabricated incinerator ready for immediate installation. Garden styles for outside burning are also produced.

In general, an incinerator consists of a masonry fire box with provision for burning of supplementary fuel if the waste is extremely moist or wet. Metal parts required include hopper, doors, fire and ash-pit doors, roof and spark screens, steel frames and rods for exterior walls on large sizes and gas burners when needed.

Installation: Incinerators are usually built by masons according to plans and specifications. The footings should extend 6 inches beyond the outside dimensions of the incinerator, be level with the basement floor and not less than 6 inches in depth.

The steel grate frame, doors, and gas burner are set in place as the masonry is built. The grate frame and grates should be set about 2 feet above the ash-pit floor.

The combustion chamber must be lined with firebrick laid with fire-clay mortar. All brickwork must be laid with full mortar joints.

Receiving hopper doors: Either steel or aluminum are used for hopper doors. As a safety feature, a sheet metal hopper is attached to the back of the door and moves with it, closing the stack when the door is opened.

Incinerator Grate: The grate is of heavy cast iron with steel grate bearings welded into the correct position for easy operating. Grates are designed for replacement without disturbing masonry.

Gas Burners: These are recommended where wastes are too moist to thoroughly reduce to ashes. A single hood type is available as well as a pilot type for greater convenience.

Spark Arrestors: Screens will prevent sparks and unburned rubbish from being carried out of the flue by the draft. Screens are available to fit any size of standard flue lining.

Fire Doors: Heavy cast iron is used for fire doors. The doors have free air openings for aeration. Door frames are made with straps for anchoring securely in masonry.

Hopper Door and Flue Sizes: The flue must be large enough to take all rubbish placed in the hopper door. The size of flue in relation to the hopper door is governed in many cases by local building codes. For durable construction the flue should be built of fire-brick with approximate inside dimensions of 18 x 18 inches or 22½ x 22½ inches.

Because of the new modular size of fire clay, flue linings are becoming general. Given below are the inside areas of these only.

INSIDE DIMENSIONS AND INSIDE AREA OF MODULAR STANDARD FLUE LININGS

Nominal Size, In.	Inside Dimensions, In.	Inside Area Square In.
16x16	13¼x13¼	162
20x20	16¾x16¾	262
24x24	20¼x20¼	385

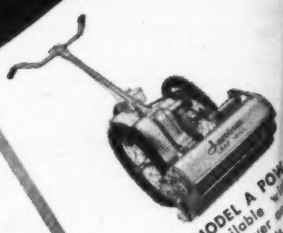
SIZE OF FLUE LINING REQUIRED

Hopper Door No.	If Flue Area Is 2 Times Door Area	If Flue Area Is 3 Times Door Area
1	16"x16"	16"x16"
2	16"x16"	20"x20"
3	20"x20"	24"x24"

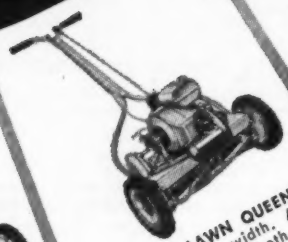
Prefabricated incinerators — For existing buildings, assembled incinerators are now being manufactured. The grate frame, fire door, ash-pit odor and pilot-type gas burner, are built in at the factory.

here's a pointer for greater mower profits

SELL Jacobsen



JACOBSEN MODEL A POWER UNIT—Available with leaf mill, reel mower and sickle bar attachments.

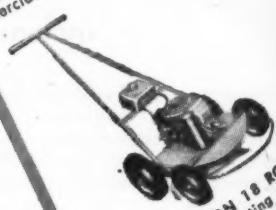


JACOBSEN LAWN QUEEN—21-inch cutting width. America's favorite for both home and commercial use.

JACOBSEN BANTAM—21-inch cutting width. Top-quality mower in the budget-price class.

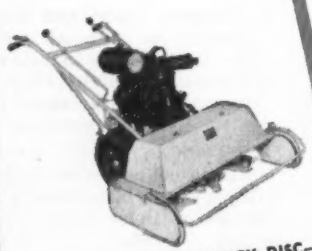
JACOBSEN ESTATE 24—24-inch cutting width. Tops for landscaped lawns, formal gardens, close trimming work.

JACOBSEN LAWN KING—26-inch cutting width. Big and rugged for wide open areas.

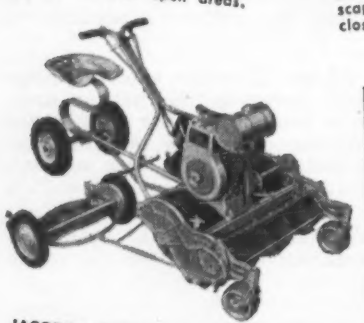


WORTHINGTON 18 ROTARY DISC—18-inch cutting width. Ideal for both city and rural use—the all-purpose mower.

WORTHINGTON 20 ROTARY DISC—20-inch cutting width. Triple-duty mower — trimmer, lawn mower, weed cutter.



WORTHINGTON 37 ROTARY DISC—37-inch cutting width. Built for big-area grass and weed cutting.



JACOBSEN PARK 30 — 30-inch cutting width. For multi-acre grass cutting — estates, cemeteries, parks. Available with side wing mowers for 66-inch swath.

Jacobsen Dealers Can Sell A Size and Type Mower for Every Job

Jacobsen builds power mowers for every grass-cutting job — side wheel and rear drive reel-type mowers with cutting widths of from 18 to 30 inches . . . rotary disc mowers ranging in size from 18-inch to the multi-acre, 62-inch machine.

Specialized equipment includes the power lawn edger; power unit with leaf mill, reel mower and sickle attachments; heavy-duty power scythe and a full range of power mower attachments... Write immediately for your copy of "The Jacobsen Story."

Jacobsen MANUFACTURING COMPANY • Racine, Wisconsin

Section 14

Lawn and Garden Equipment

SUPPLIES FOR the lawn and garden are being regarded with increasing favor by the retail building products dealer, and a high percentage throughout the country have added a representative line of these items with highly satisfactory results.

There are several reasons why these products may well be supplied by the building material dealer. First, there is the matter of convenience to the customer. Many dealers are located in, or adjacent to residential districts, and are the nearest place where these items may be obtained.

A marked decentralization of business in urban communities has been noted in recent years, and the merchant whose location is away from congested areas and near to the residential district, has a marked advantage over downtown merchants in almost every branch of consumer merchandise.

Second, with a high percentage of business operating on a five-day week, the home owner has an extra day to devote to gardening and home improvement. Many dealers have reported that their Saturday consumer traffic is many times greater than any other day of the week.

Most of the lawn and garden items are definitely seasonal. Flower and lawn seeds are largely sold in the spring but the latter are also planted in the fall. Fertilizers and lawn foods are also most heavily applied in the spring, but there is a considerable demand for them all through the summer and early autumn months.

The market for garden tools, lawn furniture, and other outdoor fixtures and accessories follows the same pattern; a definitely heavier sales season in the spring, but with a satisfactory demand throughout the warm months of the year.

The dealer's merchandising program must be planned accordingly with the heaviest sales effort being devoted at the peak periods of demand, using newspaper advertising, store display, and suggestive selling methods to promote maximum volume.

Seasonal displays sell exceptionally well if placed immediately inside the front door of a store or close to the sales counter where the customers may examine the merchandise while waiting to be served. Seasonal products displayed in a remote spot in the store will not produce spontaneous sales.

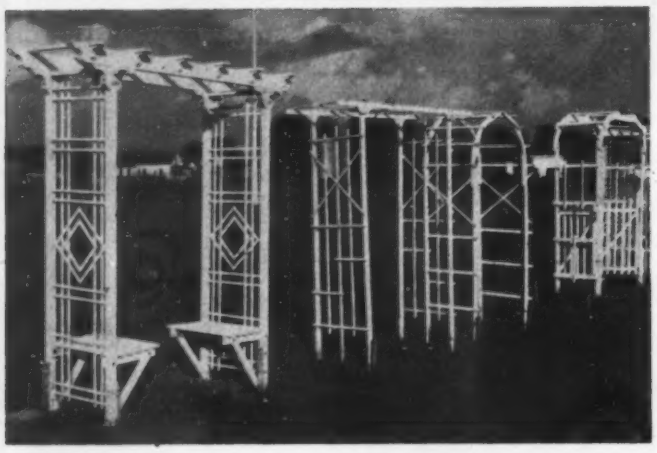
An attractive display of yard and garden merchandise on the outside of the store is also a successful way to draw customers and many dealers use this method in varying degrees with highly satisfactory results. When the season is over for the sale of these items, the dealer may relegate them to a less important spot in the store or warehuse until the next selling season arrives.

LAWN AND GARDEN TOOLS AND MACHINERY

If you will make a survey this fall of the number and location of garden plots in your retailing area, you can quickly determine a part of your potential for the sale of garden tools and machinery. Lawn mowers wear out and hose and rakes are constantly being broken and lost. The replacement market is a good one, and then there is always the man who wants to start a garden and needs full equipment. The dealer who carries an adequate stock of this type of equipment is performing a real service for the community.

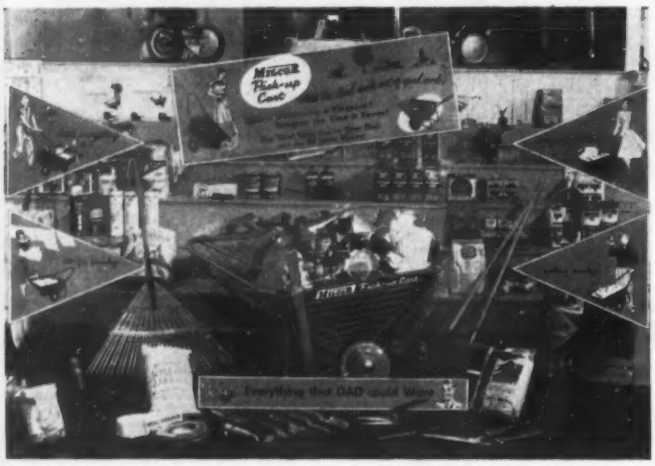
Some suggested sales items include:

Cultivators
Dandelion diggers
Dandelion rakes
Dusters
Fertilizer spreaders
Flexible rakes
Forks
Garden trowel
Grass shears
Grass slicers
Hand mowers
Hedge shears
Hoes
Hose racks
Hose reels
Hose couplings
Hose nozzles
Lawn barrows
Lawn rollers
Oilers
Power gardeners
Power mowers
Pruners
Rakes
Railroad picks
Seeders
Self-cleaning rakes
Spades
Spading forks
Sprayers
Spreaders
Sprinklers
Transplanting trowel
Turf edgers
Weed diggers
Weeder
Weed pullers
Wheel barrows
Yard lights

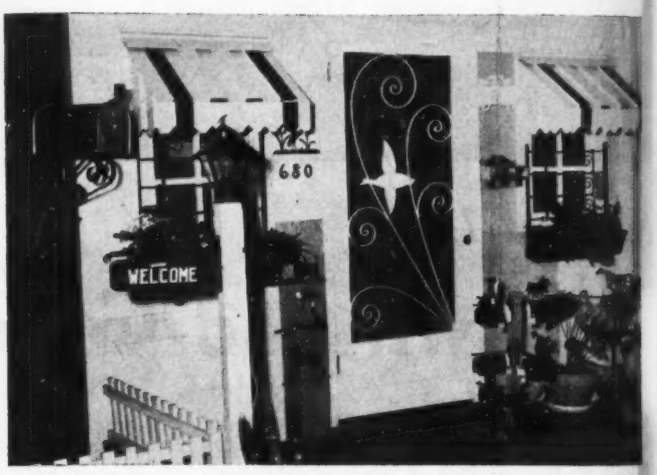


ALONG WITH TOOLS and other garden equipment go a wide range of other garden and yard accessories. Trellis is particularly popular, not only for the formal garden, but for the home owner who wants several for his roses or other climbing bushes.

BICYCLES, sporting goods, and other outdoor play equipment are good consumer items for the dealer who wants to develop this type of business.



WINDOW DISPLAYS are one of the most effective ways to merchandise gardening needs during the spring and winter months. This dealer's window offers everything from seeds to an unusual cart that has scores of uses in the garden.



THERE are many items of home improvement that serve a decorative as well as a functional service. The above display of metal awnings, flower boxes, screen door grills, lamp posts, etc. have powerful consumer appeal.

SEEDS AND FERTILIZERS

There are available on the market today a wide variety of lawn and flower seeds, fertilizers and plant foods, in package form. Many of the suppliers of these products also make available attractive and appealing point-of-sale displays that contain the inventory.

While the greatest demand does exist during the spring months of the year, lawn and flower seeding is also carried out in the fall, and many lawns and gardens are fed during the summer months.

Lawn seeds are packaged in various mixtures for shady or sunny ground, and for fertile or poor soils. These seeds have an amazingly high guaranteed percentage of germination, and are practically free of all noxious weed seeds.

Flower seed racks are a familiar sight, containing a wide variety of species, and each package carrying complete instructions for planting.

Fertilizers and plant foods are both chemical and organic compositions. It has been well established that these products will improve production of lawns and gardens when properly and frequently applied.

For the dealer who is catering to home owner trade, and who wants to develop as much casual and shopping business as possible, seeds and fertilizers are excellent items. Not only do they have universal appeal during their peak selling seasons, but they are closely allied in use and application to all of the other items of lawn and garden tools and equipment mentioned in this section.

A customer buying seeds or fertilizer is an excellent prospect for tools and applicators, lawn furniture, fencing, trellis, grilles, etc. Consequently, they make one of the best suggestive selling items the dealer handles.

FENCES, GATES AND WALKS

Among the important products and services for outside home use are fences, gates, and walks. All are essential to the home owner who desires his home and property to have a completely finished appearance.

Walks may be built of concrete, brick, flagstone, or tile. The details for installing a cast concrete walk are given in Section 19, Cement and Masonry Products.

There has been, however, an increase in the popularity of flagstone and similar stepping stone walks, imbedded directly in the soil rather than cast into a slab. These are entirely satisfactory if the stones or blocks are properly bedded. Usually, this consists mainly of setting the stones on a layer of closely compacted sand or cinders, and leveling the soil around them.

The sand minimizes upheaval during freezing and thawing conditions. If a thick sod is developed around and between the stones, they are all the more securely held in position.

Fences and gates are manufactured in a number of styles and sizes, both of wood and metal. It is essential in all fence building that the posts be securely set, preferably in concrete. If of wood, the posts should be a species of wood that is resistant to soil deterioration, or effectively chemically treated.

Items to be merchandised in this sub-department include:

Board fences
Board gothic fences
Cedar posts
Cedar rails
Hand split fences
Lattice fences
Lock-weave fences
Wood fencing
Wire fencing
Picket fencing
Pergolas
Post hole augers
Post hole diggers
Rustic
Round top stockage fences
Trellis

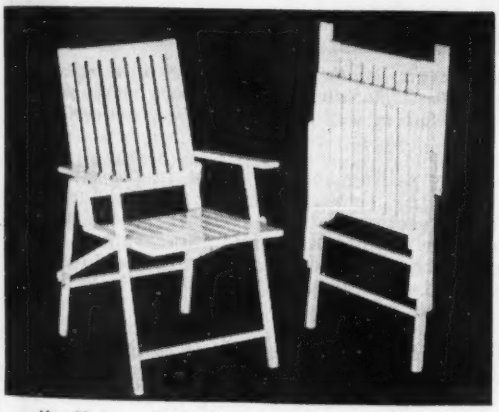
MORE CONTROLS REQUIRE NEW VOLUME

SO GET QUICK DELIVERY ON

HARDWOOD--OUTDOOR FURNITURE

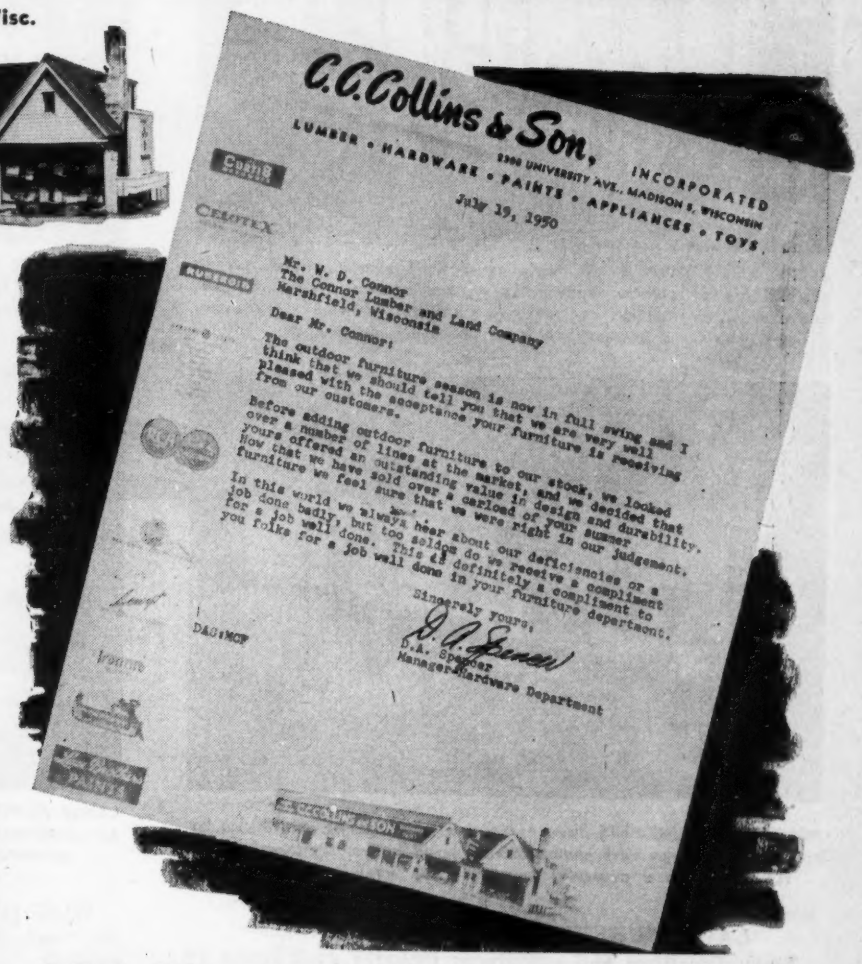
C. C. Collins & Son, Inc., Madison, Wisc. Shows How to Sell It.

No. 85 Lawn Settee—Varnish (also No. 86 Lawn Settee—White) Size of Seat 38 x 18"; Height of Seat, 18"; Overall Height 36½"; Height of Arm from Seat 7½"; Weight 34 Lbs. — Packed 2 in a Carton.



No. 80 Lawn Chair—Varnish Finish (also No. 81 Lawn Chair—White Enamel) Size of Seat 17 x 18"; Height of Seat, 18"; Height of Back, 19"; Overall Height, 36½"; Weight, 20 Lbs. — Packed 2 in a Carton.

No. 175 Folding Coffee Table—Varnish Finish (Also No. 176 Folding Coffee Table—White) Size of Top, 18 x 28"; Height, 18"; Weight, 17 Lbs.—Packed 2 in a Carton.



C.C.Collins & Son, INCORPORATED
2300 UNIVERSITY AVE., MADISON 5, WISCONSIN
LUMBER • HARDWARE • PAINTS • APPLIANCES • TOYS

July 19, 1950

Mr. W. D. Connor
The Connor Lumber and Land Company
Marshfield, Wisconsin

Dear Mr. Connor:

The outdoor furniture season is now in full swing and I think that we should tell you that we are very well pleased with the acceptance your furniture is receiving from our customers.

Before adding outdoor furniture to our stock, we looked over a number of lines at the market, and we decided that yours offered an outstanding value in design and durability. Now that we have sold over a carload of your summer furniture we feel sure that we were right in our judgement.

In this world we always hear about our deficiencies or a job done badly, but too seldom do we receive a compliment for a job well done. This is definitely a compliment to you folks for a job well done in your furniture department.

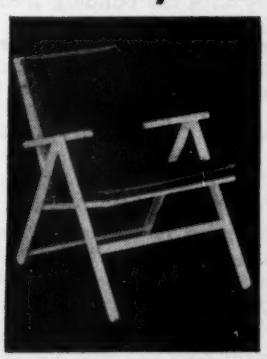
Sincerely yours,

D. A. Spencer
Manager-Hardware Department

DAS:MCF

A Retail Lumberman Says: "Get This Business."

No. 18 Yacht Chair — Varnish Finish. Size of Seat 14 x 16"; Overall Height 31"; Size of Stock 13/16 x 1⅜"; 4 to a Carton — Wt. 9 Lbs. Each.



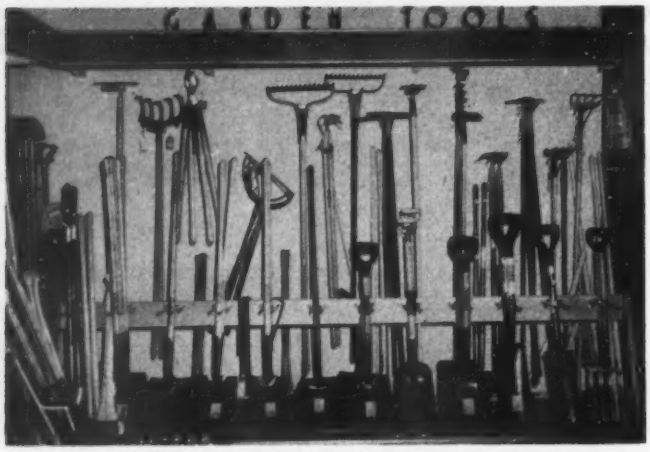
No. 90 Lawn Chair — Varnish Finish, with or without seat and back pads; also white enamel. Seat 22 x 20", 15½" high. Overall ht. 32". Back 18½" wide, 21" high. Arm 7" high. Wt. 20 lbs. 2 in carton.

No. 61 Bent Slat Chair — White Enamel, also white with green seat or red seat. Overall ht. 32". Seat 17 x 18". Arms 10" high. Seat ht. 17". Wt. 12 lbs. ea. 2 in carton.

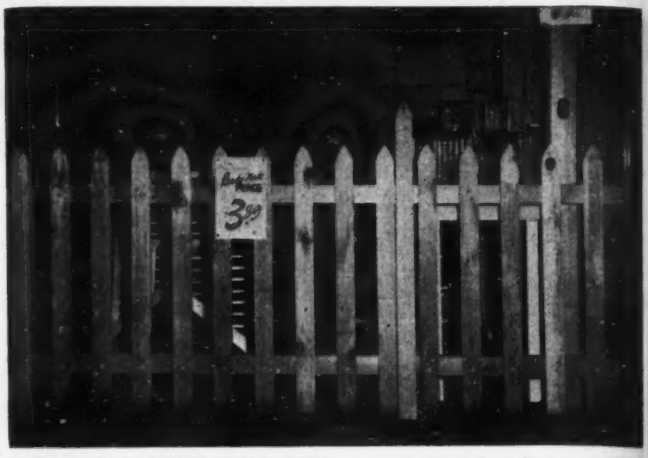
CONNOR LUMBER & LAND CO.

P. O. Box 112 — Marshfield, Wisconsin

OUTDOOR FURNITURE
A VOLUME GETTER FOR 1952



EVERY HOME OWNER has need of a definite number of garden tools. This attractive dealer display has strong appeal for the customer who must do considerable yard and garden work every year as a necessary part of his home maintenance.



DECORATIVE FENCES enhance the appearance of a house and its surrounding lawn and garden. A wide selection of attractive types can be built to suit the tastes and requirements of every customer.

POWER LAWN MOWERS have enjoyed a phenomenal acceptance by home owners, even with comparatively small lawns. Its labor saving features have a powerful appeal to the week-end gardener.

LAWN FURNITURE is growing in popularity and is a logical sale for progressive dealers. Manufacturers now offer many styles of comfortable furniture as well as tables of every description.

LAWN FURNITURE AND ACCESSORIES

Lawn furniture and equipment includes such items as chairs, tables, trellises, and similar products. Their uses are expanding, particularly with the building trend toward the patio and open porch.

They are available in a variety of styles, both knocked down and assembled, finished and unfinished. Dealers who have incorporated a complete lawn and garden line have found these items particularly good movers. With most of them, a sale also includes such standard items as paint, brushes, tools, etc.

OUTSIDE HOME DECORATION

A number of products may be classified under this heading. Most of them are installed as a permanent part of the home and serve a functional purpose as well as being decorative.

Comparatively new in this field is the stationary awning. These colorful shading devices are made of light weight metal or wood, although the metal types are more common. They are supplied prefinished, in a variety of colors, and in several styles. They usually consist of thin slats, so arranged as to hold back light penetration without cutting off air circulation.

Similar to the awning is the prefabricated canopy, an assembly that is installed over an entrance door as a weather shield as well as a decoration. These products are also supplied in both metal and wood as complete units, ready for installation on a house.

In addition to these items, there is a broad line of decorative house numbers, mail boxes, weather vanes, name plates, screen door grills, flower boxes, lamp posts, etc.; all of which have a strong appeal to the home owner seeking to add individuality and charm to the outside of his property.

While the heavy selling season comes in the spring of the year, many of the items are steady movers during all months except in sections of the country where winters restrict all outdoor maintenance and improvement work.

Some dealers with woodworking shops fabricate certain of these items and sell them in their store, with highly satisfactory results.

OUTDOOR FIREPLACES, BROILERS AND EQUIPMENT

Each year sees more outdoor cooking in America. The male of the species seem to take a special pride in demonstrating his steak broiling prowess and other culinary techniques, but he wants to do it outdoors where he has plenty of elbow room.

A well built and well equipped outdoor fireplace has many items that mean sales and profits for the dealer, including:

Barbecue pits	Outdoor stoves
Camp stoves	Ovens
Folding seats	Picnic jugs
Forks	Picnic kits
Grilles	Seats
Steak broilers	Tables

For more complete information see Fireplace Section.

GREENHOUSES, HOTHOUSES AND EQUIPMENT

Small greenhouses and hothouses to get vegetable and flower gardens started early have a special appeal now that home owners have increasing spare time. Not the least of the selling points for these items is the shortage of green food stuffs and the money saved by growing your own.

Sales items in this sub-department include:

Cold frames	Thermometers
Hot bed sash	Weather instruments
Hail-proof glass	

Section 15 Fireplaces and Accessories

PLANNING THE FIREPLACE

The location, size and general character of a fireplace is a subject worthy of careful study from the time a home project begins to take shape. Several factors are involved, the first of which, is perhaps, the chimney. It is a definite feature of the exterior architecture. In some cases, its location is determined by the desirability of enclosing several flues in the same stack, including, perhaps, that of the basement heating plant.

Interior Planning—This includes consideration of the proportions of the room as a whole, the way in which it will be used and the decorative scheme contemplated. Many fine homes in the past have been planned with rooms in series, connected by double doorways, with a living room fireplace at the end of the view—a warming reminder to visitors of the hospitality within. Fireplaces so located tended toward ornate design with emphasis on mantel ornaments and on the picture framed above. This pattern has grown less mandatory in later decades, but the desirability of framing the fireplace in a spacious doorway still has sanction.

Design Trends—With the prevailing simplification of home life, it is not surprising to find more interest in the possibilities of a small fireplace. The compact, low cost home needs a fireplace in keeping with its prevailing scale. Such a fireplace need lack nothing in charm and comfort.

More corner fireplaces are being built because in many a compact interior the corner offers the one answer. Rustic and Early American period types are holding their own but otherwise there has been a lapse of interest in strictly period treatments. Modernism is no longer the cult of recent years and the contemporary fireplace designs are more inviting, comfortable and homelike.

Side, End or Corner—The real consideration in locating a fireplace is the area of comfort and repose in the room, subject to the least disturbance from those moving about. Such roominess is most likely to be found at the side or end of a room. The sense of security and repose that goes with full enjoyment of a fireplace is impaired if there are doorways flanking the fireplace or even one doorway close to it. Similarily, windows in the range of vision impair concentration of interest on the fireplace.

Question of Projection—A fireplace may stand flush with the wall, it may extend wholly into the room or it may project for a part of its depth. The greatest freedom comes in the case of a fireplace built against an outer wall, with a stack for its sole use.

Where the fireplace is built against a partition, employing a stack with other flues, the question of projection is complicated by disposition of spaces in adjoining rooms and a partial projection is the most frequent solution.

While the extreme simplicity of modern treatments trends toward the flush fireplace, much is to be said in favor of a degree of projection. It helps to emphasize the fireplace. It affords additional space for fuel containers, fire tools or furniture. Projection is also preferably with circulating type fireplaces since the grilles may be placed at the sides, rather than on the face.

The Size Question—Home planners often need to be warned against the sentimental desire for a "great big fireplace." They forget that a great big fire would probably drive them out of the room. They need to be told that a small fire in a big fireplace is rarely satisfactory. There is much greater heating efficiency, with much less nuisance, in a fireplace 30 inches wide, well filled with flame, than there is when the same fire is built in a 48-inch fireplace.

The larger fireplace involves a larger flue. In case of the 48-inch opening, the flue lining would have to be 13" by 13" size, while the smaller, 30-inch fireplace would be served by a 13" by 8½" flue.

Heat radiated from a fireplace comes to a large extent from the heated brickwork that surrounds the flame. The closer the brickwork to the flame, the more it is heated.

Handicap of Too Large Fireplace

At left—fireplace too large for fire. Radiates less heat than where flame fits the fireplace snugly—as at right.

In the case of a 30-inch fireplace in the diagram above, the back and the sides are both heated. In the 48-inch fireplace, only a portion of the back masonry is heated. past generations it was sometimes supplied over-abun-

Air Supply for Combustion—It takes air to run a fireplace—air for draft, oxygen for combustion. In homes of past generations it was sometimes supplied over-abunddantly. The roaring logs drew drafts through every chink and cranny of window or door.

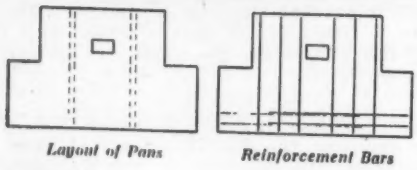
Newer techniques of weatherstripping, caulking and gaskets on casement windows have now made modern interiors as tight as a drum. If a furnace is operating the only source from which it can get needed combustion is down the fireplace chimney. Down-draft thus created prevents maintaining a fire on the hearth. The solution to this problem is well ventilated interiors. The slight opening of a basement window, for example, will generally provide air needed for the fireplace, for the furnace, the incinerator, the lungs.

BUILDING THE FIREPLACE

Two Methods of Building—The generally accepted practice, and the one which we recommend, is to complete the rough brickwork of the fireplace from ash-pit footings to chimney top before undertaking the installation of the finished interior and front. There is also a practice of finishing the fireplace in sequence as the brickwork advances. We believe that the completition of a fireplace is a task of sufficient importance to command attention apart from the general progress of rough brickwork—which may be entrusted to a man of lesser skill.

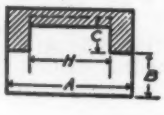
The Ash-Pit—Where the building has a basement and the ash-pit is integral with the foundation, enlarged footings may be necessary to avoid unequal settling—the result of concentrated weight of a heavy chimney. If the ash-pit is separate from the foundation, the same problem of unequal settlement must be considered. In buildings without basements, care must be taken to have the footings well below frost level as well as adequate to carry the load of the chimney. Access for removal of ashes, in such cases, will be at the exterior ground level, where the ash-pit door will be installed. Choice of a door, for either outside or inside location, should be governed by convenient shovel size, which means 12 by 8 inches or larger.

Cantilever Hearth Construction



Layout of Pans *Reinforcement Bars*

Note — Hatched portion indicates brickwork. Unhatched portion is concrete slab.



Hearth Construction—It is important that the hearth, including the fore-hearth outside the fireplace area, be wholly supported by the chimney. Compromise support, in which the floor is made to carry part of the load, entails risk of cracking the hearth, should floor and masonry settle unevenly.

The cantilever principle may be employed for a properly supported hearth and a hearth slab of adequate strength. This design calls for a reinforcing slab, 3½ inches thick. One fireplace manufacture has developed an assembly of corrugated metal forms and of reinforcing rods, which save time and lend certainty to the operation. Six corrugated metal pans, by overlapping serve for almost the whole range of hearth sizes.

Smoke Chamber—At damper level, the enclosure narrows to form the smoke chamber. It is important that the slope of its two sides be identical, the flue taking off from the center. Necessary sloping to bring the flue to its place in the stack is accomplished in the flue, not in the smoke chamber. A form consisting of two boards with connecting braces helps to give the brick a proper slope and assists in providing the important smooth surface which speeds smoke discharge.

Flue construction—Important consideration in proper building of a flue are (1) sufficient size, the net flue area being not less than 1/12 the area of the fireplace opening, (2) sufficient height, 25 feet is desirable with projection of not less than 3 feet above the highest point of the roof, (3) smooth unobstructed passage for products of combustion, and (4) slope, if any, not to exceed 7 inches to the foot.

The custom of using flue linings has become almost universal, due to the recommendations of the National Fire Underwriters and building code requirements. Inside sectional figures represent area in square inches.

OLD STANDARD		MODULAR STANDARD		ROUND LININGS	
Outside Dimensions	Inside Section	Nominal Outside Dimensions	Inside Section	Inside Diameter	Inside Section
		4x 8	15		
4½x 8	23.56	4x12	20	6"	28.27
		4x16	27		
7½x 7½	39.06	8x 8	35		
8½x 8½	52.56	8x12	57	8"	50.26
		8x16	74		
8½x13	80.5			10"	78.54
		12x12	87		
8½x18	109.69	12x16	120	12"	113
13 x13	126.56	16x16	162	15"	176.7
13 x18	182.84	16x20	208		
18 x18	248.06	20x20	262	18"	254.4
		20x24	320	20"	314.1
		24x24	385	22"	380.13
				24"	452.3

It will be noted that three different methods of measuring are employed for the three different types of flue lining—outside measurement for the old standard, "nominal" outside dimensions for the modular standard and inside diameter for the round linings. Whatever type of lining is used, the sectional areas provide a guide for the desired flue capacity, which should be based on a sectional area not less than 1/12 that of the fireplace opening.

Flue linings should be tightly cemented together. This is especially important where more than one flue occupies a single stack.

Interior Construction—A successful fireplace is one in which the fire burns brightly with a maximum of warmth and freedom from discharge of smoke into the room. Every feature of the plans and discussions offered here contributes to this result.

The Hearth Plan—Count Rumford, whose work as a fireplace designer has never been surpassed, conceived the fireplace interior as a sort of reflector. His first measure was to splay the sides and thus narrow the hearth from front to back. Accepted plans call for a splay of 6 inches per foot.

Back Is Sloped—The reflector concept is further carried out by sloping the back of the fireplace forward from a point 14 inches above the hearth to the level of the damper as indicated in the drawings. This deflects both flame and heat forward. Products of combustion pass off through the damper, but a maximum of heat is deflected into the room.

BUILDING A SUCCESSFUL FIREPLACE

Details and Dimensions

The drawings at the right show the details of the various parts of the fireplace. The circled letters are keyed to the dimension table below which gives the proper dimensions (in inches) of the different parts for fireplaces of various typical sizes. For dimensions of fireplaces with width of opening over 72 in., write The Donley Brothers Company.

Notes:

Note A — The back flange of the damper must be protected from intense heat by being fully supported by the back wall masonry. Damper should not be built in solidly at the ends. It should be left free to expand, as shown in the front elevation view.

Note B — The drawing indicates thickness of brick fireplace front as 4 in. No definite dimension can be given for this because the various materials, such as marble, stone, tile, etc., have various thicknesses.

Note C — These hollow spaces should be filled to form solid backing.

CAPACITY OF FLUE LININGS, SQ. IN.

Old Standard		Modular	
Outside Dim.	Inside Area	Outside Dim.	Inside Area
8½ x 8½	52.56	8 x 12	57
		8 x 16	74
8½ x 13	80.5		
		12 x 12	87
8½ x 18	109.69	12 x 16	120
13 x 13	126.56	16 x 16	162
13 x 18	182.84	16 x 20	208
18 x 18	248.06	20 x 20	262
		20 x 24	320
		24 x 24	385

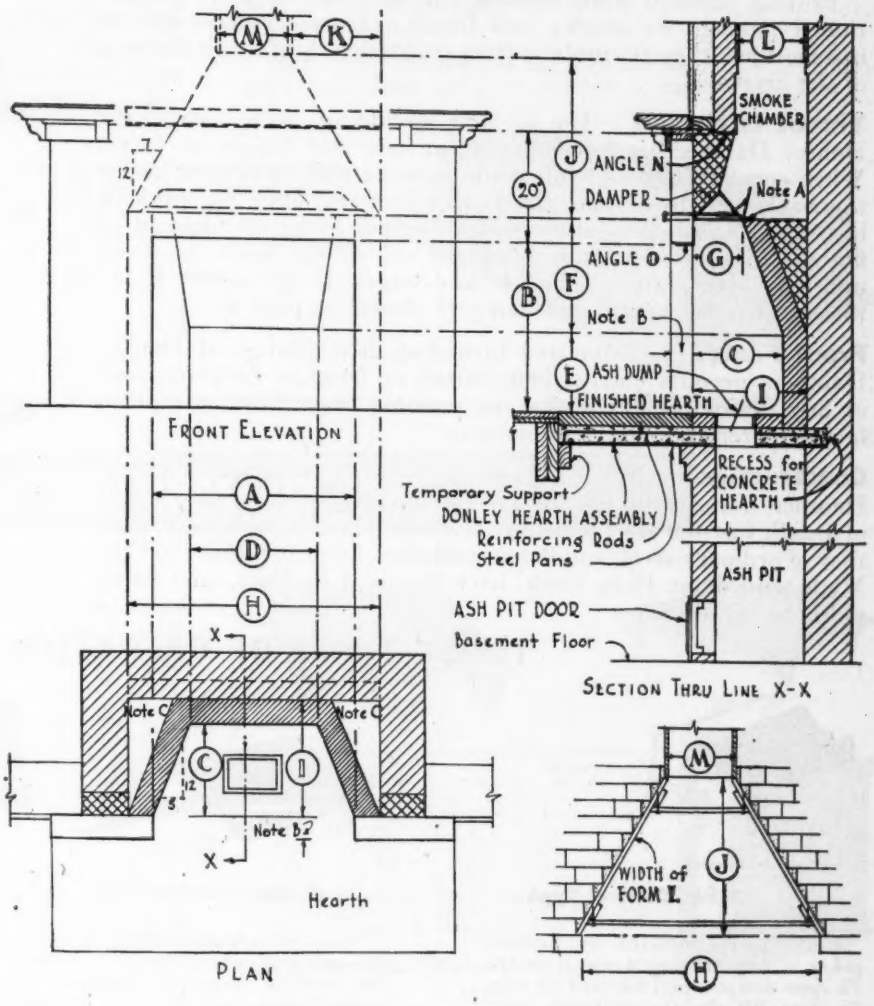


TABLE OF FIREPLACE DIMENSIONS IN INCHES

Finished Fireplace Opening							Rough Brick Work and Flue Size									Equipment						
										New Flue Sizes**				Old Flue Sizes							Steel Angles*	
A	B	C	D	E	F	G	H	I	J	K	L	M	Round	K	L	M	Hearth Assemblies	Damper Rotary No.	Damper Poker No.	Ash Dump	Ash Pit Door	N	O
24	24	16	11	14	15	8¾	32	20	19	10	8x12		8	11¾	8½x	8½	72	324	224	58	12x8	A-36	A-36
26	24	16	13	14	15	8¾	34	20	21	11	8x12		8	12¾	8½x	8½	72	330	230	58	12x8	A-36	A-36
28	24	16	15	14	15	8¾	36	20	21	12	8x12		10	11½	8½x	13	72	330	230	58	12x8	A-36	A-36
30	29	16	17	14	18	8¾	38	20	24	13	12x12		10	12½	8½x	13	72 or 84	330	230	58	12x8	A-42	A-36
32	29	16	19	14	21	8¾	40	20	24	14	12x12		10	13½	8½x	13	72 or 84	333	233	58	12x8	A-42	A-42
36	29	16	23	14	21	8¾	44	20	27	16	12x12		12	15½	13	x13	72 or 84	336	236	70	12x8	A-48	A-42
40	29	16	27	14	21	8¾	48	20	29	16	12x16		12	17½	13	x13	72 or 84	342	242	70	12x8	A-48	A-48
42	32	16	29	14	23	8¾	50	20	32	17	16x16		12	18½	13	x13	72 or 84	342	242	70	12x8	B-54	A-48
48	32	18	33	14	23	8¾	56	22	37	20	16x16		15	21½	13	x13	96	348	248	70	12x8	B-60	B-54
54	37	20	37	16	27	13	68	24	45	26	16x16		15	25	13	x18	96	...	254	70	12x8	B-72	B-60
60	37	22	42	16	27	13	72	27	45	26	16x20		15	27	13	x18	96	...	260	70	12x8	B-72	B-66
60	40	22	42	16	29	13	72	27	45	26	16x20		18	27	18	x18	96	...	260	70	12x8	B-72	B-66
72	40	22	54	16	29	13	84	27	56	32	20x20		18	33	18	x18	Special	...	272	70	12x8	C-84	C-84

NOTES. *Angle Sizes: A—3x3x⅛, B—3½x3x¼, C—5x3½x⅝.
**New Flue Sizes—Conform to new modular dimensional system. Sizes shown are nominal. Actual size is ½ in. less each dimension.

DONLEY FIREPLACE DAMPERS

Provide efficient draft control and smooth, correctly proportioned passage for smoke and fumes. Installed according to instructions, they promote correct construction of other features of the fireplace.

Throat Is Narrow — Up to and including 48 in. size, the Donley Damper has 8-in. opening at base and 4¼ in. at valve. When correctly placed against the forward wall there is room for the back wall to assume the proper forward slope for efficient heating. Narrowness also enables damper to be set forward of flue so that downdraft is pocketed on smoke shelf, back of uplifted valve plate. The 54″ and larger dampers have a 12″ throat; also the square end dampers shown on page 6.

Front Flange — Distinctive turned-up front flange of Donley Dampers permits correct installation at front of fireplace, and at any desired height above the opening, regardless of type of facing material or shape of opening.

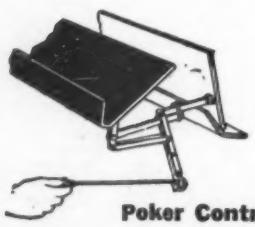
Construction — Of highest grade cast iron. Poker Control Dampers for 24, 30, 33, 36 and 42 in. fireplaces are also made of U.S.S. Cor-ten steel which has corrosion resistance 4 to 6 times that of ordinary steel, and is not weakened by heat below 1200° F. Made with dome ⅛ in. thick, back flange ¼ in. thick, and valve plate 3/16 in. thick.

Steel Poker Control Damper

These steel dampers are for poker control operation. Dimensions same as for cast iron.

Rotary Control Damper

THREE TYPES OF OPERATING DEVICE



Poker Control Type

Valve plate operated by hooking poker in ring hanging down in center. *To open damper*, pull forward on ring. *To close*, lift slightly and push back. This control is less conspicuous than the Rotary Control shown at the right.

Rotary Control Type

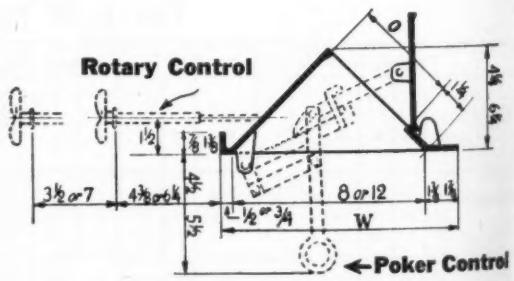
Valve plate is operated by turning a die cast brass-plated knob on front of the fireplace. Regularly supplied with control at center but also available with control near right end.

Chain Control Type

Has valve plate pivoted in center. Operated by pulling one of the two chains. Made in 30, 36 and 42 in. sizes only to meet occasional demand.

DIMENSIONS OF DONLEY DAMPERS

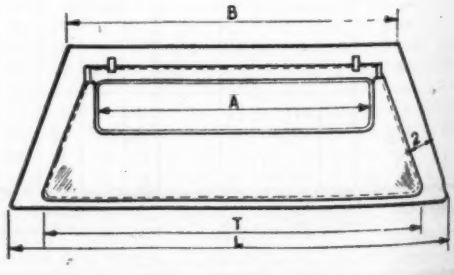
Made for fireplaces having openings 2 to 8 ft. in width. Size of damper is determined by maximum width of fireplace opening. The proper damper for each width of fireplace opening is shown in table. Diagram at right and table below enable designer to calculate space required for any damper. Where two dimensions are indicated in same line of diagram, smaller is for sizes up to and including Nos. 248 and 348, and the larger dimension for Nos. 254 and larger. Both operating devices are indicated to show dimensions. For construction details, see diagram and table of dimensions on page 4.



Dimensions in Inches

Fireplace Opening Width	Poker Control No.	Rotary Control No.	Throat Bot. T	Throat Top A	Throat Op'g. O	Overall L'th. L	Overall Back B	Overall W'th. W
24″	§224	324	24	17 5/16	4¼	28½	21	9⅞
30″	§230	330	30	23 5/16	4¼	34½	27	9⅞
33″	§233	333	33	26 5/16	4¼	37½	30	9⅞
36″	§236	336	36	29 5/16	4¼	40½	33	9⅞
42″	§242	342	42	35 5/16	4¼	46½	39	9⅞
48″	248	348	48	41 5/16	4¼	52½	45	9⅞
54″	254		54	42½	7	58½	46	14⅝
60″	260		60	49½	7	64½	53	14⅝
72″	272		72	60½	7	76½	64	15⅝
84″	*284	*384	84	73½	7	88½	77	14⅝
96″	*296	*396	96	85¾	7	100½	89	14⅝

*Two valve plates. §Steel or Cast Iron.



Dampers for Two-Way and Projecting Corner Fireplaces

DONLEY FIREPLACE DAMPERS (Cont'd)

Dampers for Unusual Fireplaces

For projecting corner and two-way fireplaces Donley makes square end dampers. The throat is 12 in. wide at base of damper, due to the larger openings in these fireplaces, and the ends are square to conform to the rectangular hearth shape. Made for Poker Control only.

For a two-way fireplace opening in adjoining rooms, two dampers and a supporting tee are required. For a projecting corner fireplace, one damper, a 2 in. post and one steel angle and a plate for lintel are required.

When planning an unusual fireplace, you are invited to send plans or sketches to The Donley Brothers Co. for suggestions and recommendations and a list of equipment which should be used.

Note: The damper and the steel tee should not be built in solid at the ends but given freedom to expand with heat.

Dampers for Projecting Corner and Two-Way Fireplaces

Fireplace Opening		Damper No.
Width	Height	
32″	29″	532
36″	29″	536
40″	29″	540
48″	32″	548

Square End Damper

DONLEY FIREPLACE EQUIPMENT

Ash Dumps

Trap doors placed in the hearth for convenient disposal of ashes. Door locked in frame and pivoted off center is opened and closed with poker. No. 58-S, 8x5 in., is made of heavy gauge rust-resisting Cor-ten steel. Angle frame is welded at corners and has a deep perforated flange that will anchor firmly in the masonry. No. 48, 4½x8 in., No. 58, 5x8 in., and No. 70, 7x10 in., are of stove grade cast iron.

Ashpit and Flue Cleanout Doors

Installed in bottom of chimney or stack for easy removal of ashes and soot. Three smaller sizes are made of ⅛-in. rust-resisting Cor-ten steel. The frame is of welded angle units. Wide flanges on frame provide support for masonry and anchorage into wall. The two larger sizes have cast iron frame and the No. 184 has a cast iron door. For other doors, see page 5 in our catalog under Section 26a/DO.

Dutch Oven Doors

Ornamental doors made by expert molders from highest grade cast iron. Used to reproduce Early American Kitchen Fireplaces or as ornamental cleanout doors beside basement fireplaces. Available with hinges on either right or left side. If not specified, hinge on left will be supplied. Regularly supplied finished in gray paint, baked on. They will fit wall opening 12½x15½ in. Over-all size, 15x18 in.

Steel Angles

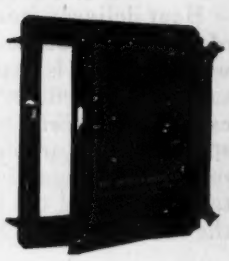
Standard hot-rolled Donley Steel Angles support brickwork over fireplace openings as well as over doors and windows. Strong, inexpensive and painted to resist rust. 3x2x3/16 and 3x3x3/16 are made in lengths of 30, 36, 42, 48 and 54 in. 3½x3x¼, same lengths plus 60 and 78 in. 5x3½x5/16 and 6x4x⅜ are cut to order.

No. 58

No. 70

Order No.	Width	Height	Shipping Weight
88	8″	8″	70 lbs. doz.
128	12″	8″	115 lbs. doz.
1212	12″	12″	150 lbs. doz.
*184	18″	24″	50 lbs. each
§240	24″	30″	70 lbs. each

*Cast iron door and frame.
§Cast iron frame, steel door.



Ornamental Cranes

Fabricated from ⅝-in steel bars. Pleasing in design and strong enough to stand stress of actual cooking. Consists of crane member pivoted in two anchors for building into the masonry in such manner that crane can be easily removed and replaced.

No.	Length of Crane	Width of Fireplace Openings	Between Anchors	Shipping Weight
1	22″	24″ to 31″	14¼″	10 lbs.
2	26½″	32″ to 43″	14¼″	12 lbs.
3	32½″	44″ to 53″	18¼″	14 lbs.
4	41½″	54″ to 72″	21¾″	16 lbs.

Cantilever Hearth Assembly

The cantilever principle must be employed in a properly supported hearth and this means a hearth slab of adequate strength. The design calls for a reinforced slab, 3½ in. thick. In helping to make better hearth slab construction convenient to the fireplace builder, The Donley Brothers Co. has developed an assembly of corrugated metal forms and of reinforcing rods, which save time and lend certainty to the operation. Corrugated metal pans, by overlapping, serve almost the whole range of hearth sizes. Order by giving width of forehearth.

DONLEY HEATSAVER FIREPLACE UNIT

The Donley Heatsaver Fireplace is an efficient and versatile combination of fireplace and furnace. It supplements the radiant heat from the open fire with a generous amount of air warmed by conduction through steel plates at back, sides, and above the fire and circulated by convection throughout the room or adjoining rooms. A real economy of fuel is effected by the use of the Heatsaver.

The Heatsaver is a steel unit with firespace, damper and smoke chamber all scientifically engineered to provide complete combustion. It is encased in an outer steel jacket within which air is circulated, warmed and discharged through pipes to outlet grilles located in the same room as the fireplace or in adjoining rooms as desired. A scientific arrangement of baffles within the air chamber insures transfer of the maximum amount of heat to the air and at the same time increases the velocity of the air which means more heat in the room. So complete is the heat transfer that the outer air jacket does not become dangerously hot. This eliminates the need for a heat insulating blanket around the outside of the Heatsaver.

The patented tube through the upper chamber, just above the damper, permits the air to pass freely over the heated metal surfaces, leaving no dormant hot air pockets.

Heat delivery from this type of fireplace is a product of the temperature and area of the metal surfaces to which the air is exposed. In the design of the Heatsaver every effort has been made to increase this exposure. Recent tests by the Battelle Memorial Institute of Columbus, Ohio, the largest independent research organization in the world, showed that the temperature of the lower and upper surfaces varied in the ratio of 456° to 324° or about 60 to 40. This proves the advantage of this upper heat collecting section with less heat being wasted up the chimney.

The side walls of the Heatsaver are rectangular, not splayed as in the usual masonry fireplace. This provides a greater fuel capacity in the fire box and permits wood fuel the width of the opening. The splayed sides in a masonry fireplace assist in reflecting heat. In a Heatsaver the heat circulating around the room is of greater importance than the radiating heat from the fire.

Insures a Smoke-Free Fireplace

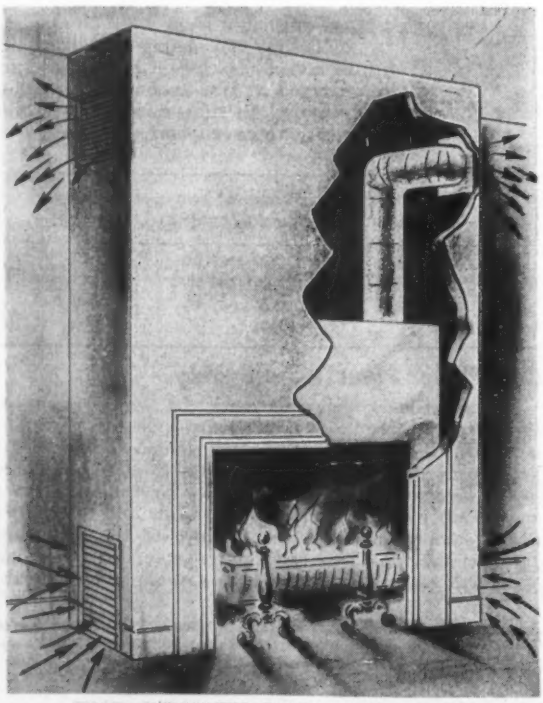
The Donley Heatsaver, correctly installed, assures a successful fireplace, smoke-free and smudge-free. It is a complete, correctly proportioned metal unit, including the damper. The inside of the fireplace is already accurately built which eliminates errors of inexperienced workmen.

Wide Range of Usefulness

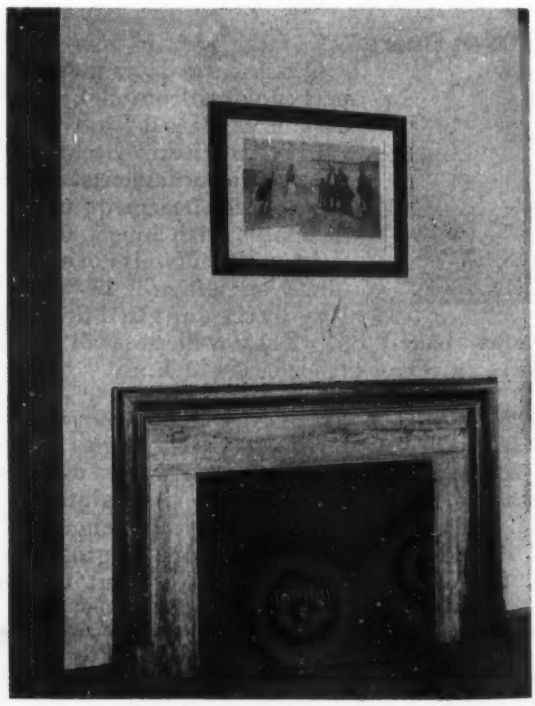
The Heatsaver is a sufficient heating system for small homes, cottages or homes in mild climates. In larger homes with a central heating plant, the Heatsaver carries the heating load in Spring and Fall. In churches, clubs, etc., it heats one or two rooms for committee meetings without heating the entire building at a considerable saving over firing the main heating plant.

Round furnace pipes from openings in the top of the casing lead to grilles in the same or other rooms. It is an advantage in some installations to have the cold air inlets and the warm air outlets in different rooms. For maximum heat from the Heatsaver Fireplace, use number and size of outlets shown in table on page 11. Heat is wasted if air cannot flow freely through the heating chamber.

Cutaway showing Heatsaver and circulation of air through it.



Showing finished appearance of a Heatsaver Fireplace with cold and warm air grilles same as in cut at left.



DONLEY HEATSAVER FIREPLACE UNIT (Cont'd)

Heat Output

The amount of heat from any size Heatsaver is unusually great due to the large area exposed to the heat and to four exclusive features:

First, the improved Heatsaver has a rectangular firebox which increases the circulating heat and permits length of fuel wood the full width of opening;

Second, the Heatsaver makes use of the heated surface above the fire as well as the surfaces surrounding it;

Third, special heat-circulating tube takes air from the hottest areas and passes it through the smoke chamber where it picks up additional heat which is then diverted to the hot air ducts; and

Fourth, the ingenious baffle sheets (an exclusive Donley feature) guide the moving air so that it passes directly over the heated surfaces. These sheets keep all the air in motion, prevent pocketing of heated air and transfer all available heat to the room. They, together with the heat-circulating tube, eliminate the need of an insulating jacket.

Heating Economy

The quantity of heat obtained from a Heatsaver fireplace is in proportion to the size of the fire, not the size of the fireplace. With the same consumption of fuel in each unit, the heat delivery would be greater from a 36-in. Heatsaver than from a 48-in. unit, since the flame would come closer to the metal walls that separate the fire chamber from the air chamber and the smaller flue will exhaust less air from the room.

Selecting the Proper Size

To assist in selecting an appropriate size of Heatsaver Fireplace, we give in the table at right our recommendations for a number of typical rooms. In choosing a Heatsaver for a given location, consideration must be given to:

(1) the cubical contents of the room in which it is located and of the whole space to be heated,
(2) the space available for the fireplace itself,
(3) the extent of reliance on fireplace heating,
(4) the size of the flue,
(5) climatic conditions,
(6) type of building construction,
(7) type of fuel used,
(8) rate of fuel consumption.

If there is doubt about proper size, send us complete information about the different factors and we will make recommendations.

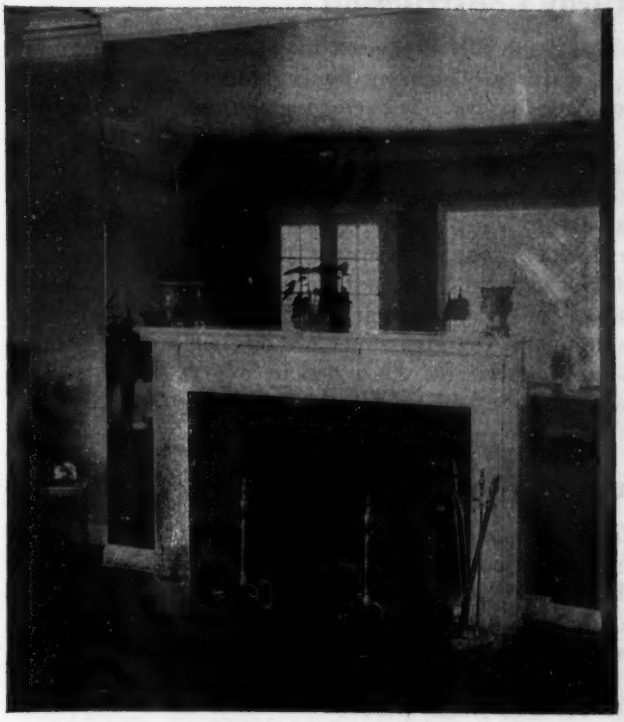
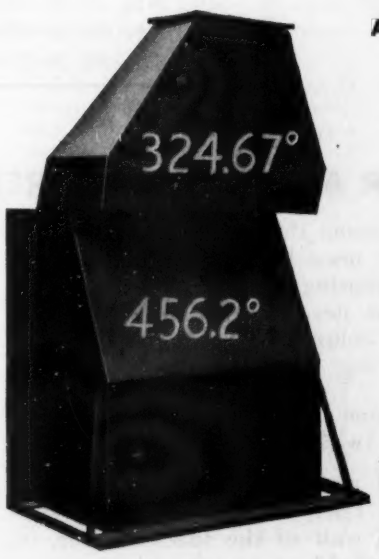


TABLE OF SUGGESTED SIZES

Size of Room In Feet	Heatsaver Size When Located On	
	Short Wall	Long Wall
10x14	No. 28	No. 28
12x16	No. 28—32	No. 32—36
12x20	No. 32—36	No. 36—40
12x24	No. 32—36	No. 36—40
14x28	No. 36—40	No. 36—48
16x30	No. 36—40	No. 40—48
20x30	No. 40—48	No. 48—60



Area of Heated Surface

Above Smoke Shelf
2904 Sq. in.

Around Firebox
2878 Sq. in.

Temperature Measurement

Sturdy Construction

The Donley Heatsaver Unit is built along the lines of a warm air furnace, having an air chamber surrounding the fire. It is constructed to give a lifetime of dependable service and satisfactory performance. The back of the chamber and the smoke shelf are of ¼ in. steel boiler plates. Lighter weight steel is used where duty is less severe. Casing designed to be pierced for outlet pipes, as in warm air furnace, is 26 gauge galvanized steel. A throat damper designed for poker control (page 5) is integral with the unit. Joints and fastenings of the Heatsaver are electric arc-welded for maximum strength. Designed by experts and made to exact specifications, perfect draft is assured with no danger of a smoky fireplace due to careless workmanship.

Now in Modular Sizes

The Heatsaver has been redesigned and is now made in sizes to conform to modular dimensions, as developed by the building industry to simplify and economize installation costs. The flue openings are made to conform to modular flues.

Air Inlets and Outlets

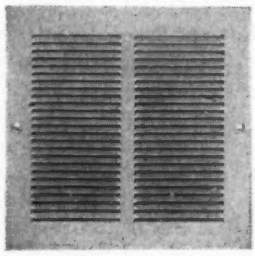
At the lower side is an area through which cold air enters the Heatsaver to be warmed as it rises. The warmed air leaves through openings above the Heatsaver.

These outlets may be located as dictated by the position of the fireplace and the general design of the room. All openings are covered by inconspicuous grilles which do not interfere with the room decoration.

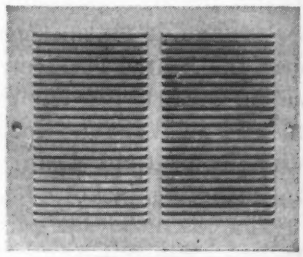
Grilles, for Donley Heatsaver, are louver type with small openings which conceal the interior and also exclude mice. They are of stamped steel with frame. All grilles are regularly furnished with gray prime coat.

Inlet Grille, No. 43, is 9⅜" x 9⅜" for smaller Heatsavers and 9⅜" x 11⅜" for larger models.

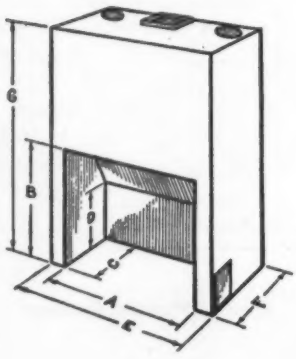
Outlet Grille, No. 46, is 11⅜" x 9⅜" for smaller Heatsavers and 13⅜" x 10⅜" for larger models. Supplied with metal frame for fastening to outlet box.



Intake, No. 43

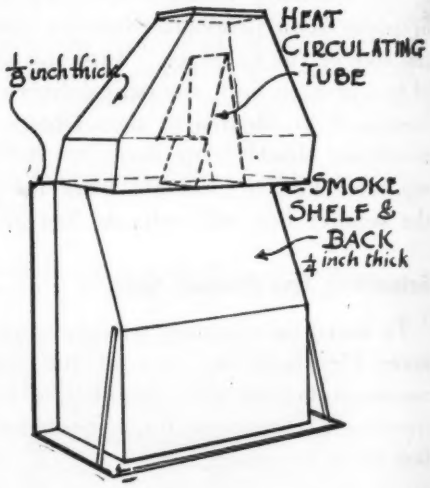


Outlet, No. 46



DIMENSIONS OF HEATSAVER UNITS

Heatsaver No.	Heatsaver Dimensions, In.							Shipping Weight
	A	B	C	D	E	F	G	
28	28½	27½	16	16	35½	23½	55½	375
32	32½	27½	16	16	39½	23½	55½	405
36	36½	27½	16	16	43½	23½	55½	435
40	40½	30⅛	18	18	55½	23½	66⅛	550
48	48½	30⅛	18	18	63½	23½	66⅛	620
60	60½	32¾	20	20	75½	27½	79½	900



HOW TO ORDER A HEATSAVER FIREPLACE

Many customers assume that the Heatsaver unit, alone, is all that they need to purchase, aside from mason material, in securing a Heatsaver Fireplace. Actually there will be need for all the accessories listed in the adjoining column. To simplify ordering, we suggest the following:

"Ship to our order one No.....Heatsaver with Standard Accessories" (with the desired size filled in).

A crane is optional and, if desired, it should be specified in ordering. Then we will weld crane support lugs to the metal wall of the fire chamber, on which the crane will be held, at no extra charge.

Articles that will be shipped when order says "Heatsaver with Standard Accessories".

1—No. __ Heatsaver (state size desired).
1—No. 58 Ash dump.
1—12 x 8 Ash-pit door.
1—3 x 3 x 3/16 x 42" steel angle.
1—5 x 3½ x 5/16 x 54" steel angle.
2—No. 43 grilles (size to suit unit).
2—No. 46 grilles (size to suit unit).
2—24" lengths of 8" galvanized pipe, K.D.
2—12" lengths of 8" galvanized pipe, K.D.
4—Elbows of 8" galvanized pipe.
2—Outlet boxes 8" x 10".

INSTALLATION OF DONLEY HEATSAVER

The recommended method of installing the Heatsaver is to place it in the desired location on the hearth and build the brickwork around it. The system of air directing sheets in the warm air chamber keeps the outer shell at a safe temperature and directs the air over the heated surfaces. This results in maximum efficiency of the unit.

Locating the Hearth — Like any other fireplace, a Heatsaver may project more or less from the surrounding wall. It may be practically flush, as in Plan No. 1, opposite, or projected as in No. 2. Projection has a possible effect on the arrangement of cold air inlets. The remodeled Heatsaver has the cold air inlet located forward, as shown, for most effective heating results. Variations from the typical, usual, installation should maintain the same area of air passage as indicated by the size of opening in the casing.

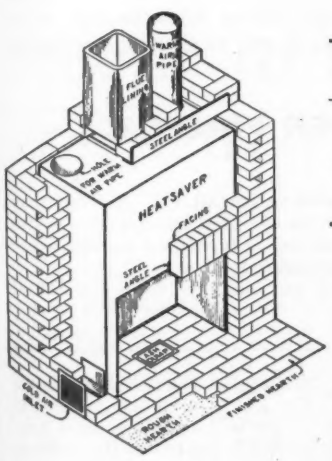
Two Steel Angles Needed—Completion of the brickwork will call for two steel angles. The smaller angle supports the breast masonry, its ends resting on the jambs. The larger angle goes across the top of the unit and supports the front of the chimney.

Outlet Pipes — Four sections of round galvanized furnace pipe, two of them 24″ and two 12″ in length, are regularly furnished on order with Heatsaver assembly. They are to be connected to the top of the Heatsaver in the manner shown in diagrams at the right. With it also are furnished the required elbows — two in case the outlets are turned forward and four where located at the side of the fireplace projection.

Grilles Required — Two cold air inlet grilles and two warm air outlet grilles are required for the typical installation. The location of grilles is dependent on choice and projection of the fireplace into the room. If the fireplace face is flush with the wall, the grilles will be in front. If the fireplace projects into the room 13 inches the inlet and outlet grilles may be placed in the side of the projection. The warm air outlet grilles are usually placed near the ceiling. No fans are necessary for adequate air circulation.

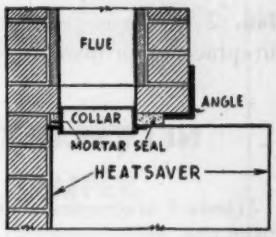
Connecting the Flue—See diagram below. Note that the angle supporting the chimney crosses just above the Heatsaver unit but does not rest on it. Flue lining should rest on prepared brick ledges, not on the collar of the unit. Mortar seal around collar is important, but do not let mortar spill into Heatsaver.

Placing of Accessories — The ash-pit should be provided with a Donley Ash-Pit Door. It should be the 12″ x 8″ size in order to admit a shovel and located with its bottom flush with the floor of the pit. The ornamental Dutch Oven Door is frequently used for this purpose when located in recreation or other used rooms. Also requiring preliminary attention is the Ash Dump. Provision for it should be made in laying the rough concrete hearth slab. An opening of proper size is left in the slab, although the Ash Dump itself is installed in the finished hearth.



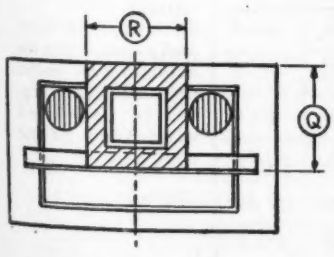
ROUGH MASONRY DIMENSIONS FOR BRICK CONSTRUCTION, IN.

No.	H	J	K	L	M	N	P	Flue Size
28	52	32	36	24	28	26 3/4	56	12 x 12
32	56	32	40	24	28	26 3/4	56	12 x 12
36	60	32	44	24	28	26 3/4	56	12 x 12
40	72	32	56	24	28	29 1/8	66 3/4	12 x 16
48	80	32	64	24	28	29 1/8	66 3/4	12 x 16
60	92	36	76	28	32	32	80	16 x 20

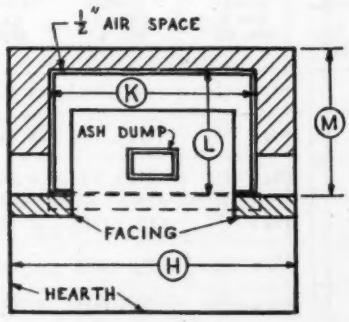


Note: The above figures are nominal sizes to conform to modular dimensions. The thickness of facing will vary with material used. The wall back of the Heatsaver as shown is 4″ thick. If this is an exterior wall it should be 8″, and dimension M increased 4″.

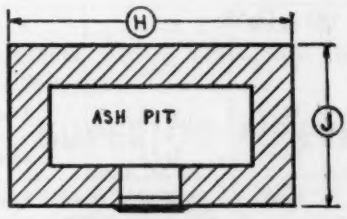
Q and R measurements can be determined by adding wall thickness to flue size dimensions. Since wall thickness can vary, Q and R are not given in the table. Minimum wall thickness is 4″. On the 28″ unit only, the R measurement cannot be more than 20″ or the warm air opening through the casing, as shown on the drawing, will be distorted.



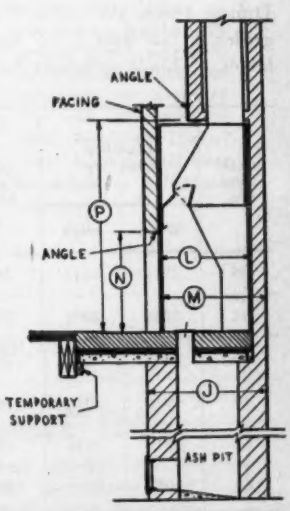
Plan Above Heatsaver



Plan Above Hearth

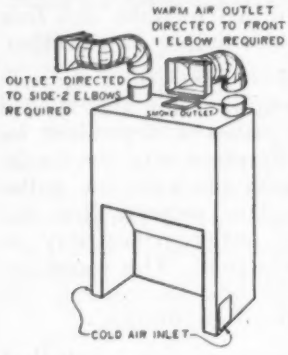


Plan Below Hearth



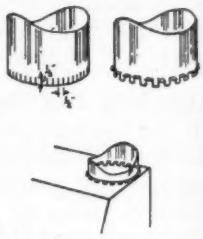
Section on Center Line

ARRANGEMENT OF WARM AIR OUTLETS

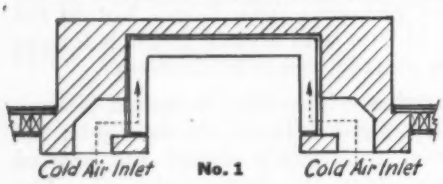

WARM AIR OUTLET DIRECTED TO FRONT 1 ELBOW REQUIRED
OUTLET DIRECTED TO SIDE-2 ELBOWS REQUIRED
SMOKE OUTLET
COLD AIR INLET

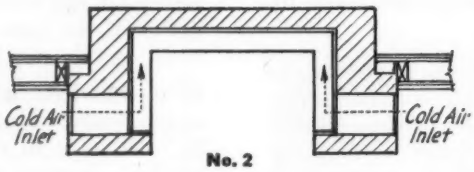
It makes little difference in the task of installation, whether the outlets are in front or at the side. There are also instances where the owner wishes to direct the heat to an adjoining room or to a room on the story above. In that case, additional lengths of pipe may be required, which can readily be obtained from local furnace supply sources. If it is necessary to use rectangular pipes in meeting a special situation, it is suggested that round pipes be used to carry heated air to point where change is made.

***Attaching the Pipes**— Those unfamiliar with furnace practice will not find it hard to attach pipe to the Heatsaver. The diagram shows how pipe should be snipped and alternate leaves turned at right angles. Seat the pipe in opening so that it rests on bent leaves. Reach down through the pipe and bend the straight leaves inside the unit, so that they have a tight contact with the top.*



TWO ARRANGEMENTS OF COLD AIR INLETS





The accompanying diagrams show a number of suggestions for the location of cold air inlets.

No. 1 — Where a fireplace is to be installed in an existing building having none, this design permits the flue to be placed entirely outside the frame wall and enables the fireplace to be built with a minimum of cutting. The amount of projection is governed by the size of flue and thickness of wall between flue lining and outside wall.

No. 2 — Where wall is large enough to permit the fireplace to project into it without apparent crowding and where inlet grilles must be inconspicuous, this design is recommended.

Other arrangements for cold air inlets have been used to suit special requirements. Thus, grilles may be placed in the baseboard at the sides of the fireplace or even across the room and air brought through ducts under the floor. Another arrangement draws air from the back of the fireplace with the grille in another room.

For Unusual Installations — The previous directions are based on the usual installation of Heatsaver Fireplaces.

Sometimes, however, needs or conditions present a special problem. Under these circumstances the experience of this company is freely available for those who need help. We desire every installation of a Heatsaver to be a success, as it will be, if properly done.

NECESSARY EQUIPMENT FOR INSTALLING HEATSAVER FIREPLACE

(ALL DIMENSIONS IN INCHES)

Standard accessories shipped on an order for Heatsaver of given size, unless otherwise noted on the order, include 1 Ash Dump, 1 Ash Pit Door, 2 steel angles, 2 No. 43 and 2 No. 46 grilles, 2, 24″ and 2, 12″ lengths of pipe, 4 elbows and 2 outlet boxes. This is sufficient for an installation as shown on Page 7.

Because of occasional variations in installation this list may need to be changed, and we are always glad to suggest ways to meet unusual conditions. If a sketch is furnished we will figure the piping necessary and ship accordingly.

Be sure to note on the order any changes from the list of standard accessories.

Heat-saver No.	Masonry Opening		Ash Dump No.	Ash Pit Door	Steel Angle For Fireplace Opening	Steel Angle For Chimney	Cold Air Intake Grilles Use 2 No. 43	Warm Air Outlet Grilles Use 2 No. 46	Warm Air Pipes See Note	Warm Air Outlet Boxes Use 2
	Wide	High			C-3 x 3 x 3/16 D-3½ x 3 x ¼	A-5 x 3½ x 5/16 B-6 x 4 x ⅜				
28	28⅛	26⅜	58	12 x 8	C-36	A-46	9⅜ x 9⅜	11⅜ x 9⅜	8 Dia.	10 x 8
32	32⅛	26⅜	58	12 x 8	C-42	A-50	9⅜ x 9⅜	11⅜ x 9⅜	8 Dia.	10 x 8
36	36⅛	26⅜	70	12 x 8	C-42	A-54	9⅜ x 9⅜	11⅜ x 9⅜	8 Dia.	10 x 8
40	40⅛	29⅛	70	12 x 8	C-48	A-66	9⅜ x 11⅜	13⅜ x 10⅜	9 Dia.	12 x 9
48	48⅛	29⅛	70	12 x 8	D-54	A-74	9⅜ x 11⅜	13⅜ x 10⅜	9 Dia.	12 x 9
60	60⅛	32	70	12 x 8	D-66	B-86	9⅜ x 11⅜	13⅜ x 10⅜	9 Dia.	12 x 9

Grilles — Inlet Grille No. 43: stamped steel louver type which conceals interior. Outlet Grille No. 46: stamped steel and metal frame for attaching to outlet box. All grilles regularly furnished with gray prime coat.

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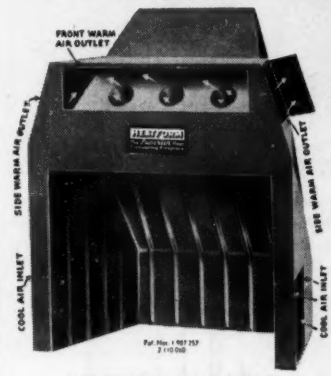
HEATFORM

The *Superior* Heat Circulating Fireplace
• most efficient and durable of all •
*TRADE MARK REG.

COMPARISON PROVES GREATER HEAT DELIVERY



HEATFORM Model "A"
Eight stock sizes 24" to 72"

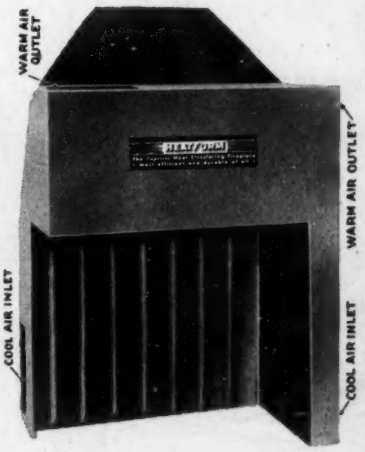
— because:

- More Heating Surface; air chambers surround firebox and upper front and side walls of the throat
- Larger cool air inlets and warm air outlets produce greater air circulation and more heat
- Contact of air to all heating surfaces due to multiple connecting air passages through and around the throat
- The heating surface of the dome and round air flues through the throat add one-third more heating surface

LONGER LIFE

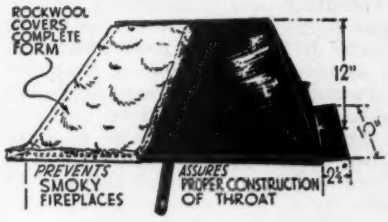
— because:

- Ribbed reinforced firebox adds necessary strength to flat metal to control warpage. The ribs also add to the appearance of the firebox
- The larger air inlet and outlet capacity produces a greater volume of air circulation which removes the heat from the hot metal faster; thus preventing red-hot deteriorating temperatures
- Masonry downdraft shelf —no exposed metal beneath chimney flue to rust out



HEATFORM Model "S"
View of Fire from Front & Side

SUPERIOR FORM DAMPER



- Saves labor time; no forms to build, no bricks to cut, no throat to plaster. Eliminates cracking of masonry by use of rockwool and detached lintel bar. Heavy steel construction — lifetime service

SUPERIOR FORM DAMPER
the Architects' Friend

Write for
complete dealer information and distributor stock nearest you

SUPERIOR FIREPLACE CO.

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Los Angeles 21, Calif.

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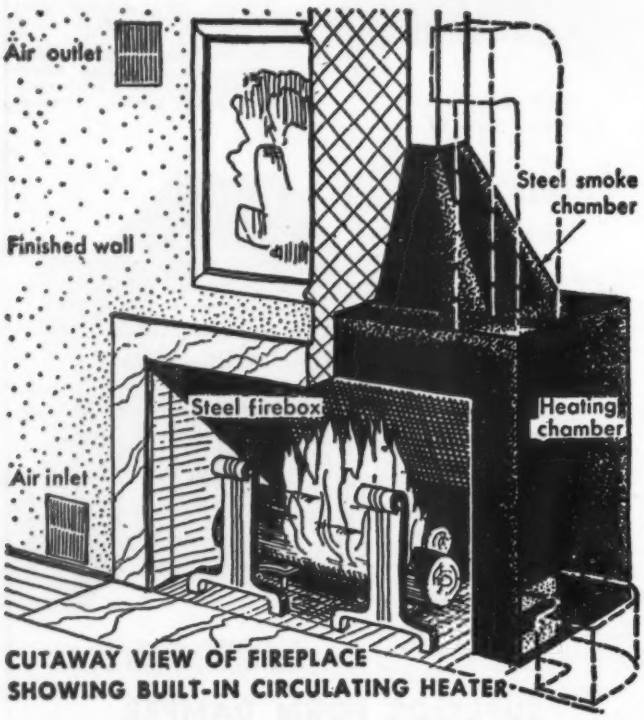
601 North Point Road
Baltimore 6, Maryland

The Pioneer Designers and Builders of Heat Circulating Fireplaces

FIREPLACES are effective supplements to central heating systems. They are also adequate for heating small dwellings, summer cottages, or homes in areas where heating requirements are less heavy.

OUTDOOR fireplaces may be elaborate as shown above or simple and less costly. The construction is not beyond the skill of any fairly handy homeowner.



CUTAWAY VIEW OF FIREPLACE SHOWING BUILT-IN CIRCULATING HEATER

Advantages of This Fireplace—Its outstanding advantage is that it warms you wherever you are—close to the fire or on the opposite side of the room, near a window or in another room. In approving this type of fireplace, represented in his own Pennsylvania Fireplace, Benjamin Franklin wrote that instead of being toasted on one side and chilled on another, people were comfortable on both sides. Heat delivery from this type of fireplace is a product of the temperature and area of metal surfaces to which the air is exposed.

OUTDOOR FIREPLACES

Purpose and Location—In a great majority of cases, fireplaces are planned with the thought of outdoor cookery, although many owners will wish to combine the opportunity for an attractive blaze to brighten the shadows of summer evenings.

The location is worth careful study. Your outdoor fireplace should be a part of a pleasant garden setting, with plantings to give it a sense of enclosure and with tables and benches conveniently arranged. Do not build too far from the kitchen door. The carrying problem may spoil much of the barbecue enjoyment.

Fireplace Materials—All fireplaces represent combinations of masonry with metal grids, doors, covers, reinforcing angles, etc. Common brick is generally the most accessible, low-cost material and the easiest to handle. It may be used with the native surface exposed, or it can be painted with specially adapted masonry paints to harmonize with surroundings.

Firebrick is a good material with higher resistance to heat than other bricks. However, the ordinary common or shale brick stands the moderate heat of outdoor fireplaces very well.

Support Important—Whatever type or size of fireplace is to be constructed certain questions will arise. The first of these is support. The fireplace must not sag or heave as the result of frost or water action. The best practice is to support the fireplace with a concrete slab wider than the structure and 6 or more inches in thickness. More important than the type of support is the need for a well-compacted sub bed. Filled-in earth should have a chance to settle or be thoroughly tamped.

Moisture Difficulties—it is a practice quite frequently followed to elevate the hearth a few inches above ground level to avoid ground drainage into the ash chamber. Joined masonry should be tightly bonded to prevent action by frost.

Control of Smoke—The smoke problem in the case of an outdoor fireplace is different than in an indoor fireplace. Constant air currents blow the smoke in every direction. Chimney heights are less diminishing draft. In the case of a garden fireplace, relief from smoke is promoted by facing the fireplace in the direction of prevailing winds and shielding it as much as possible from counter winds. The flue should be ample—the throat relatively open. A damper is of no avail and is omitted.

In the case of cooking fireplaces with a chimney, the prime consideration is to have a fire chamber that can be tightly closed when smoke-producing fuel is being burned. If the top is opened during the use of charcoal fuel, it should be arranged to protect the face of the chimney from discoloration.

FIREPLACE ACCESSORIES

Fire Baskets—This accessory is designed essential for masonry type of fireplaces but some designs may also be used with circulating fireplaces.

Log Rests—These are usually purchased in pairs but where the fireplace is large and only short wood is available, three or four are sometimes used. They are planned for the homeowner who burns wood exclusively in his fireplace. Log rests may also be used with outdoor fireplaces because the top rest will support a grid or grill.

Andirons—Graceful andirons provide a decorative touch when co-ordinated with the other elements in the fireplace grouping. The shank on the andiron is slipped underneath the log rest or fire basket in use.

Firesets—A good fireset with shovel, poker, tongs and hearth brush makes fire tending easier and more enjoyable.

Screens—Fireplace screens are available in many types and are made to blend with the fireplace itself.

Fuel Containers—These are designed to hold both wood and coal. The wood carriers are usually of brass and the coal containers are practical black.

Fire Lighters—Before matches were to be had, our ancestors carried fire by means of an absorbent stone, provided with a handle and soaked in oil. One variation is commonly known as the Cape Cod lighter. These modern versions of the old firelighters keep a blaze going for several minutes, reducing kindling needed.

Section 16

Kitchen -- Bathroom -- Laundry

Kitchen

Modern kitchen design is based on the efficient arrangement of the cabinets, appliances, and accessories that are used to accomplish the three primary work functions of this room.

1) Storing food and preparing it.
2) Cooking and serving it.
3) Cleaning up.

To do these jobs easier, quicker, and better, the housewife needs two major appliances—a range and refrigerator, to which may be added several supplementary appliances—dishwasher, garbage disposal unit, etc., each serviced by a group of storage cabinets and a stretch of work surface. Each division of appliances, cabinets, and work surfaces is called a work center.

Organization of Work Centers. The three work centers, properly arranged and outfitted and in proper relation to each other, so that work flows in a straight line from one center to the next, make up the basic planned kitchen.

Storing—Refrigeration Center. As a result of an extensive step and motion study by Westinghouse Electric Company it was found that the refrigeration and preparation center should be located near the outside entry where food is delivered.

Here should be grouped perishable and non-perishable foods, all sorts of baking dishes, salad molds, cake tins, pie pans, flour sifters, graters, mixer, etc., because they are first brought into use in this center.

This arrangement makes it possible to prepare either a single recipe or food for an entire meal with a minimum number of steps. There should be a generous work surface next to the refrigerator for the actual preparation. The most ideal arrangement is a continuous work surface from refrigerator to sink, as much preparation requires the use of the sink.

Cooking and Serving Center. This center is best located near the door to the dining room for convenience in serving.

Following the principle of storing equipment at the point of first use, frying pans, griddles, pot lids, cooking cutlery, coffee maker, tea pot, bread and pastry toaster, etc. are kept in this center. Since most serving dishes are first used at the range, they are also kept here.

Cleaning Up Center. Water being used for both preparation and cooking, as well as cleaning up, this center should be stationed between the other two. A generous work surface should flank both sides of the sink.

This center houses the silver, paring knives, sauce pans, cleaning materials, and provides a ventilated compartment for storage of potatoes, etc.

Water Heaters and Kitchen Planning. The water heater is always considered essential to good kitchen planning. Whether the unit is located in the kitchen or not is unimportant; but an adequate, efficient water heating system is an important part of modern kitchen planning.

Determining Cabinet Storage Space Requirements. Research has revealed that six square feet of upper cabinet shelf space should be allowed for each person in the home. In addition to this, six square feet should be added for entertaining, and another six feet for accumulation.

Upper storage space is the cabinet shelf space above the counter line. The square footage applies to shelf area only.

Base cabinet storage space is calculated on a linear front foot basis, because the many variations in this type of storage make a square foot shelf area calculation needlessly complicated. Base cabinets should occupy all the space beneath upper wall cabinets not required by range, refrigerator, dishwasher, etc.

An exception is when maximum amount of linear footage of base storage space is available, with a shortage of upper, due to window locations. In such cases, make up the difference by installing an upper cabinet or a tall shelf cabinet elsewhere in the room, usually in a corner. It is unnecessary to install another base cabinet under this.

Seven Types of Kitchens. In figuring both new home and remodeling installations, you will find that all designing will fall into one of seven basic room layouts. These are illustrated below, and are defined as follows:

"U" Kitchen—This is the most ideal type because work surface is continuous around three sides of the room and traffic is kept out of the work area.

Broken "U" Kitchen—This type usually requires a minimum of structural changes.

"L" Kitchen—Highly efficient, with two walls left open for door and window openings. Also provides space for incorporating breakfast alcove.

Broken "L" Kitchen—This type, like the broken "U" eliminates expensive structural changes.

Individual Center Kitchen—The logical solution for a badly cut-up room.

Two-wall Kitchen—An ideal arrangement for the small, narrow room.

Straight-wall Kitchen—Offers maximum convenience in a minimum of space.

7 KITCHEN TYPES

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In the accompanying layouts, "A" indicates the Cleaning Up Center, "B" the Cooking and Serving Center, and "C" the Refrigeration and Storage Center.

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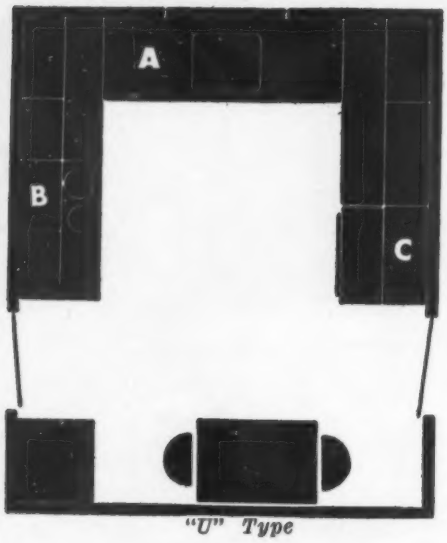
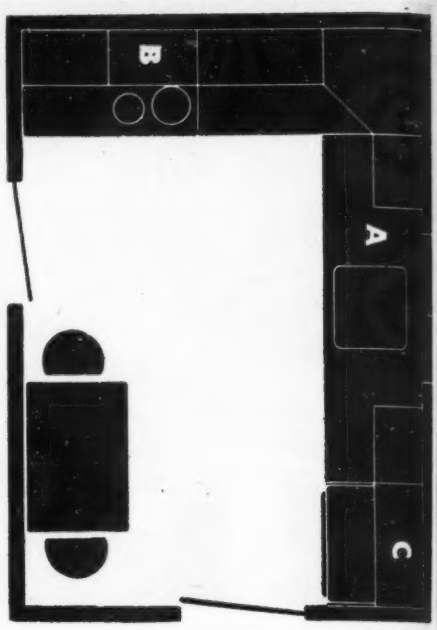
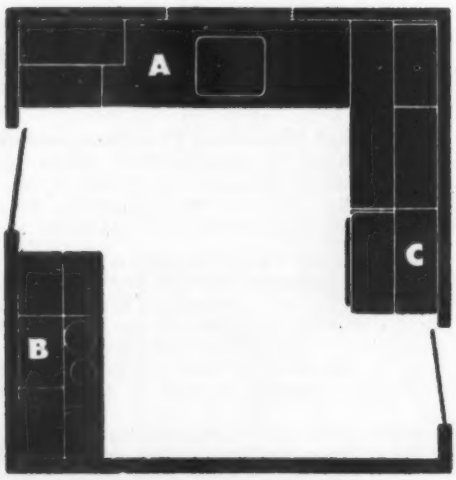


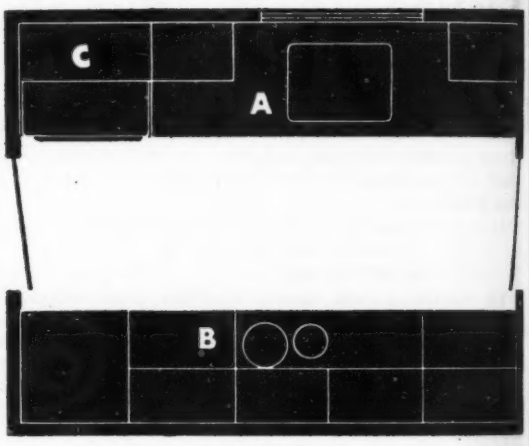
"U" Type



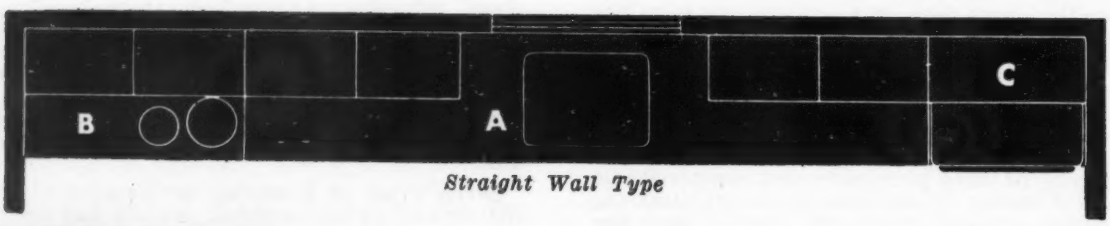
"L" Type



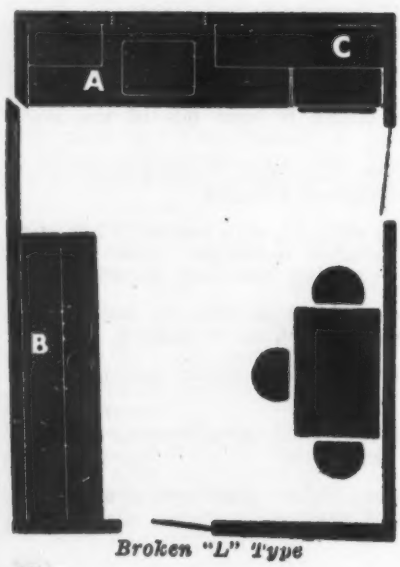
Broken "U" Type



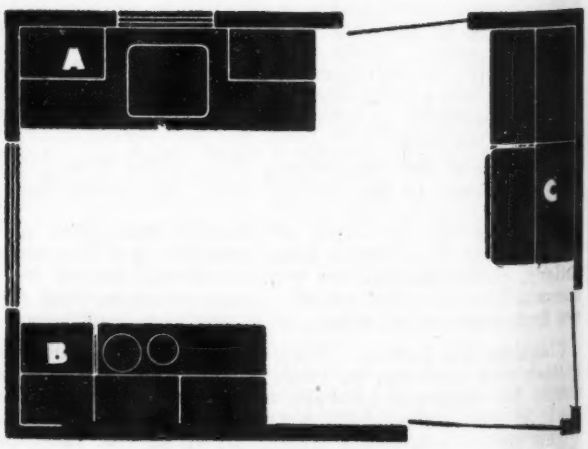
Two-Wall Type



Straight Wall Type



Broken "L" Type

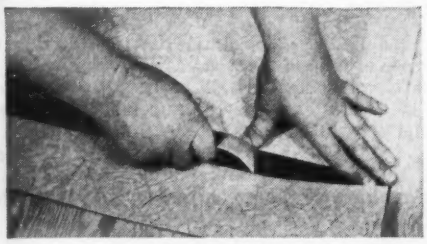


Individual Center Type

STEP BY STEP instructions for VERSIBOND installers

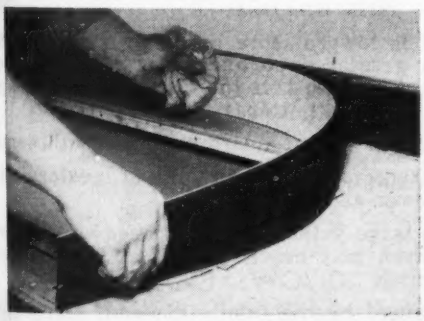
Easy-to-follow instructions are furnished VERSIBOND installers. In addition to step-by-step instructions for general applications of VERSIBOND, special attention is given to sink-tops where sink frames and metal moldings are used. Examples showing how easy it is to handle and install VERSIBOND are illustrated below.

Typical Procedures in the Installation of VERSIBOND



1. When cutting VERSIBOND, hold knife fairly close to point, as illustrated. Draw knife LIGHTLY toward you to make the guide track. Make several more cuts in guide track *with increasing pressure* until you have cut through the surface of VERSIBOND to its rubber backing.

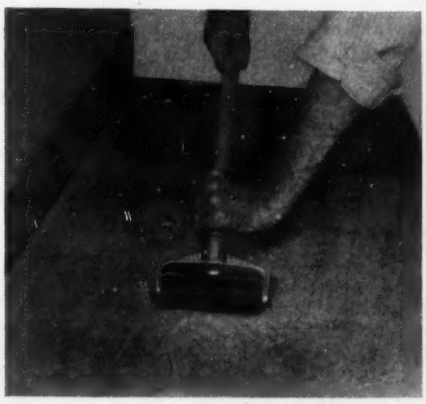
Bend the waste strip back and cut through the rubber from the underside. Hold blade so as to make a slight bevel on the edge of the VERSIBOND. (Beveling makes a cleaner edge.) Smooth the cut edges of the VERSIBOND with a block plane, sandpaper or flat file.



2. After applying VERSIBOND CEMENT NO. C-10 to a backsplash surface and giving the cement 10 to 15 minutes to become tacky, the VERSIBOND backsplash piece is placed in position as illustrated above.

3. Use a semi-circular arm motion when applying VERSIBOND CEMENT NO. C-10 to the base surface as illustrated in view at foot of preceding column. A notched trowel is used. Spread the cement evenly to assure a perfect bond. Next, wipe off the rubber back of VERSIBOND with white gasoline and a clean cloth.

4. Place the VERSIBOND sheet into position on the base surface, (as illustrated above) sliding the sheet a little to keep it 1/32" to 1/16" away from any metal trim (to avoid binding and buckling later.)



5. After the VERSIBOND has been placed in its final position, use a rubber roller with a 5" face to roll down the sheet as illustrated above.

Always roll down the LONG way of the sheet . . . starting at the CENTER and rolling down from one end to the other. Keep rolling down from end to end toward the FRONT edge of the sink top.

Then return to the CENTER of the sheet and roll down from end to end toward the REAR of the sink top. Always use plenty of arm pressure with a *slow, steady motion.*

6. View shows proper method of weighting down a butt joint. A *thin, narrow* slat or a narrow strip of waste VERSIBOND is placed over the seam. Then it is weighted down with sand bags or other available weights, as illustrated. Weights must not be removed for 48 hours to give the cement a permanent set. (VERSIBOND SPECIAL PURPOSE CEMENT NO. C-11 should be used for butt joints.)

7. Applying the metal trim to the front edge of the sink top is the final step. Complete details for installing all metal trim and Tap-N-Roll or "T" type sink frames are included in the complete VERSIBOND instructions.

Important Note! Due to the wide diversity of conditions encountered in actual installations, the complete instructions should be consulted before making an installation of VERSIBOND.

THE warmth and beauty of natural wood is often effective when combined with gay, colorful laminated plastic sink and counter tops.

PREFINISHED hardboards were used for this cleverly designed kitchen-breakfast nook. Hardboards are durable, easy to apply.

Planned Kitchen Lighting. The kitchen is the workshop of the home and should, therefore, be well illuminated. It should be free from glare and shadows. A central ceiling fixture is not enough. Supplementary lighting is needed, and should be so placed that the homemaker never works in her own light. Ideal kitchen lighting should include the following:

General Lighting.—A central ceiling fixture of semi-direct, semi-indirect, or totally indirect design to provide general room illumination.

Lights at the Centers.—Correct lighting should also be provided at each center.

Switches and Outlets.—The switches for the center light are usually located near the doors so there is no need to grope in the dark upon entering the room.

Local lighting units over the sink, range, and work centers should be controlled by switches on or below the fixtures.

At least one twin convenience wall outlet should be installed in each center with additional ones for the refrigerator, dishwasher, or other major appliances.

For additional information concerning lighting and light fixtures, see Section 16.

INSTALLATION DATA

One of the first steps in kitchen installation is to check the corners of the room to see if they are square. Slight variations can be eliminated by scraping or filling in the plaster. Where the room is badly **out-of-square,** however, it is necessary to use a cap-strip at the top of the backsplasher to close the misalignment.

If individual work surfaces for each center are used with the surface seal corner strip to close and seal the joints between, the counters can be opened a sufficient amount at either the front or back to care for the irregularities in the angle of the wall.

Checking the Floor. The next step is to check the floor to be sure it is level. Shims under the cabinets may be used to make up slightly off-level floors. Extreme cases may require the installation of a completely new subfloor.

Checking Walls. Walls that are out of plumb affect only the upper wall cabinets. These can easily be plumbed up by shimming out either the top or the bottom of the wall cabinets at the time of installation.

Should structural changes be necessary, such as moving doors or windows, this should be done before actual installation work begins.

ASSOCIATED EQUIPMENT AND MATERIALS

Base Cabinets. Base cabinets are of two types, drawer or cupboard; or combinations of both. They are usually 30½" high, placed on a 4" toe space with a counter 1½" in thickness. This makes a total of 36" from floor to top of counter. Cabinets are usually 24" deep.

Wall Cabinets. These are of two types, open and closed. Many modern kitchen designs include both. They are available in a variety of heights and widths. Standard heights are 18", 24", 30", and 36". Standard widths are 15", 18", 21", 24" 27", 30", 33", and 36".

Wall cabinets higher than 36" have little value from the standpoint of convenience. The use of a standard base of 36", plus 16" between base and 36" wall cabinet, makes an overall height of 88". The open space between top of cabinets and ceiling should be burred down to eliminate a definite dust trap, make cleaning easier, and to enhance the appearance of the kitchen.

For further information about cabinets in the home, see Section 2, Millwork.

Floor Coverings. Floor coverings for kitchens are usually rubber or linoleum, although tile is also widely used. These materials are available in attractive patterns and colors to suit the taste of every homemaker. See Section 9, Floor and Floor Covering.

Wall Surfaces. Exposed wall surfaces may be finished in a wide variety of ways. Tileboard, plastic faced plywood, ceramic tile, composition tile, metal tile, glass linoleum, rubber or asphalt tile, or plain plaster painted. The choice is subject to the amount of money the customer wishes to spend, or to the decorative effect desired.

THE BATHROOM

Since the trend is toward more bathroom space in the home, there is a greater opportunity for the dealer to increase his sales. This trend in the case of the average home follows one of three patterns:

1. Two or more full size, standard equipped bathrooms.
2. One main bathroom plus utility units of lavatory and toilet, or shower and toilet.
3. One or more large bathrooms partitioned off so more than one person may use it at a time. These often include two lavatories.

This trend is caused by the family demands at certain times, particularly mornings when everyone in the family is getting up at the same time.

This highly important personal convenience and sanitary center is constantly subject to improvement and refinement; for this reason, remodeling of present bathrooms and adding new ones in existing homes can be a big part of the dealer's merchandising plan. Economy-sized units are offered that allow a complete bathroom to be put into a very small space in an existing home.

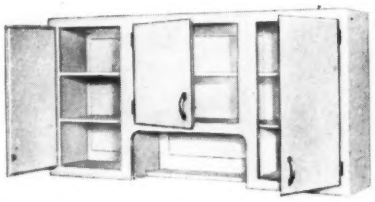
Dealers should be familiar with the complete bathroom units which have been developed recently. One complete unit includes kitchen, laundry and heating center combined with the bathroom.

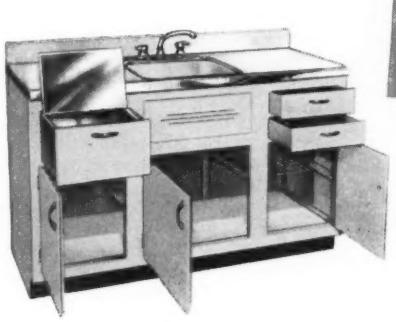
Planning the Bathroom. In planning the bathroom for either a new home, or the remodeling of an old one, there are several accepted points of good design to consider.

Nothing should be placed under a window, unless it may be a heating outlet. No plumbing fixture can be conveniently installed under a window; but a radiator or convector located there, will overcome drafts and keep the room warmer.

KITCHENS WITH *personality* BY I-XL

STYLED and BUILT FOR ENDURING STABILITY and BEAUTY





. . . . EVERYONE WHO CAN MEET EASY FHA TERMS CAN HAVE A BEAUTIFUL STEP-SAVING I-XL KITCHEN . . . .

Yes, every home owner who is eligible for FHA financing can quickly enjoy the beauty and convenience of a modern and streamlined I-XL Kitchen. I-XL new style flush end single or double bowl sinks and cabinets are being financed under FHA from coast to coast.

Picture it! the latest in modern kitchen design, correctly styled and in eye-appealing color. A smart, efficient kitchen, all in FRENCH BLUE . . . in CITRON YELLOW . . . in WILLOW GREEN . . . in SANDALWOOD. Or, if desired, base cabinets in Blue and wall cabinets in Citron Yellow or vice versa. I-XL kitchens also come in baked-on White Enamel or Natural Finish Birch.

WRITE FOR OUR NEW COLOR KIT . . . PLAN KITCHEN COLOR COMBINATIONS BY SLIDING THE COLOR SWATCHES INTO THE CELLOPHANE INSERTS.

CHECK THESE MERITS

- √ All Cabinets sealed against moisture.
- √ Kiln dried Hardwood.
- √ Properly nailed, screwed and glue blocked.
- √ Flush plywood ends on Base Cabinets.
- √ Flush solid lumber ends on Wall Cabinets.
- √ Center drawer bearers for easy opening.
- √ Factory finished, trimmed, ready to install.
- √ 130 Patterns to choose from.
- √ 12" to 84" widths with intermediate sizes.
- √ Packaged units or complete kitchens.
- √ Custom built sink and counter tops.
- √ Single or double bowl sinks.
- √ Formica or Linoleum tops.
- √ High Quality — Good Service — Fairly Priced.
- √ Backed by 98 years' woodworking experience.
- √ I-XL leads the field in value.

THE I-XL FURNITURE COMPANY

Dept.— 4 K, Goshen, Indiana

A MODERN BATHROOM that will delight any family. Fixtures, medicine and storage cabinets, floor and wall covering, accessories, and electrical fixtures and outlets are all included in this installation job.

MODEL KITCHEN, bath, and laundry displays in the store show the customer how the complete room will look in his home, and are invaluable sales builders.

As a general rule, the bathroom should be placed where it is most convenient. Plumbing costs can be saved however, if it is placed directly over the kitchen; or in a one-story home, back to back with the kitchen. In this way, one stack or soil pipe will serve two rooms. When this is done, however, the wall that carries the pipe must be at least six inches thick.

Money can also be saved if all plumbing fixtures are placed against one wall. This cuts to a minimum the amount of behind-the-wall piping, and simplifies installation. The poorest plan from a cost point of view has one fixture on each wall.

The bathroom door should be 28" wide and should swing into the bathroom. The view through the door should be of the lavatory or tub, never the toilet.

Minimum space between fixtures is 6 inches. Here are the most common sizes of fixtures:

Tub (rectangular) .....2½x5 feet
Tub (square) .....4x4 feet
Lavatory....17x19, 18x20, 20x24, 14x26, 21x24 inches
Water closet .....23x27 inches
Shower.....32 inches square up to 3½ feet square

Unlike kitchen equipment, bathroom fixtures need have no relation to each other. It is possible to contain all of the necessary fixtures for an adequate bathroom into a space 5 feet square, but for a family bathroom, a room should be at least 6x8 feet.

Medicine Cabinets. Medicine cabinets are made of seamless porcelain, seamless baked enamel, or wood, trimmed with chromium-plated brass with a mirrored front. Lighting is either indirect or fluorescent. One of the newer developments is the illuminated wing cabinet.

While the better medicine cabinets have a generous amount of space, there is no use blinking the fact that they are not large enough to store all the medicines, cosmetics, and toilet articles commonly used in the bathroom. Several alternatives are possible. One is the installation of two medicine cabinets, one over the lavatory and the other at a convenient place, possibly near the window. The other is to provide space for medicines in one of the other cabinets, as for instance the cabinet intended for linens. Still another possibility is to utilize the space under the lavatory which is otherwise wasted.

Safety Precautions. Another **must** in bathroom planning is **safety.** Accidents in the bathroom are not unusual—far too frequent, in fact. Many are preventable. Planning the bathroom for safety is a factor in the prevention of accidents. Electric light switches and outlets should not be placed where they can be reached by a bather in the tub. The reason is obvious—the tub is a perfect ground for an electric current. Should the switch or insulation be defective, the circuit is completed.

The bather should be protected against slipping in the tub by grab-bars which should be firmly attached to the wall. There is much to be said in favor of the metal L-shaped grab-bar which provides a firm hold, both vertically and horizontally.

Other Suggestions. Here are other suggestions that have been made for increasing the usefulness of bathrooms.

1) Built-in dressing table in the bathroom. The trend toward the use of the bathroom as a dressing room is so definite that the provision of a dressing table is almost a **must** in bathroom planning. New materials provide an opportunity for making this feature distinctive and beautiful. In one suggested plan a lavatory is mounted in a counter top with a dressing table adjoining.

2) A dressing room adjacent to the bathroom is advisable if there are several in the family to use the bathroom at the same time, because it relieves the traffic in the bathroom proper. Moreover, temperature in a dressing room is usually more comfortable for dressing, being in between the steamy warmth of the bathroom and the cooler more livable temperature of the bedroom.

3) Panel of drawers at the end of recessed tub. This innovation permits use of a lower-priced recessed tub and also provides storage space at a convenient point.

4) Niches for radio and books. Many people will appreciate the thoughtful provision of niches for radio, books, and magazines in the bathroom. It is so much neater to have niches so that these things can be tucked into the walls instead of having them on exposed shelves.

5) Built-in bathroom scale. An ingenious method is to provide a place in the floor so that the scale can be streamlined with the floor surface. The scale can also be recessed in the wall when not in use.

6) In-the-wall cabinet for health lamps or electric heater.

Hot Water Uses	No. Persons Using	No. Times Used Monthly	Gallons of 150° Hot Water Used Each Time	Total Gallons Used Monthly
Tub Baths or Showers	4	32	7.0	224
Hands	4	540	0.9	486
Shaving	1	30	2.0	60
Dishes	4	90	2.8	252
Laundry	4	4	30.0	120
Miscellaneous	4	30	3.0	90
				Total 1232 gallons

Cabinet manufacturers from coast to coast are adapting their specifications to the installation of Chambers waist-hi GAS Built-Ins. The typical arrangement shown here is by Belwood Kitchens.

A Fresh Field For

VOLUME SALES

With Built-Ins By

Chambers

COOKS WITH THE GAS TURNED *off* ®

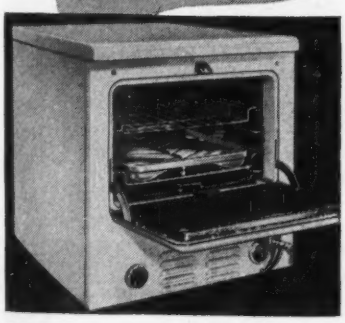
It's no mystery why women already are sold on Chambers *waist-hi* GAS Built-Ins. They are keen for this most modern development in *automatic* cooking. They enjoy the freedom from stooping, bending, and lifting. They like these units because they can be installed anywhere in the kitchen.

Leading kitchen-cabinet companies have been quick to recognize this new kitchen trend. They now provide special units in their lines to fit in with Chambers Built-Ins. (We'll send you their names and specifications, on request.) Modern streamlined kitchen cabinets and Chambers *waist-hi* GAS Built-Ins transform workshop drudgery into a modern dream of efficiency.

Dealers, plan now to meet this new demand! Cash in on the terrific profit possibilities in this strong sales trend. Chambers Built-Ins will bring increased volume to dealers who specialize in modern-kitchen salesmanship. Women prefer Chambers Built-Ins not only because they represent a new trend in kitchen design. They also represent a new way of cooking that saves food, flavor, time, fuel and labor. Only Chambers "In-A-Wall Oven" *Cooks with the Gas Turned off.* Only Chambers offers a choice of oven doors in stainless steel or seven decorator colors. No other line of cooking equipment offers you such flexibility in kitchen design, or provides your customers with this World Famous Cooking Performance.

Originator and Master Builder of Insulated Ranges since 1910

ACCEPTED by FHA for Underwriting Loans



"IN-A-WALL" Oven is heavily insulated—top, bottom, all sides—utilizing reflected heat to "cook with the gas turned off." Its huge, family-size capacity accommodates up to 40 lbs. of roast. Beautifully finished in stainless steel, or stainless with oven doors in choice of seven beautiful decorator colors.

"IN A TOP" 3-Burner Drop-In with plated surface fits into counter top by providing opening of 18½" x 33⅝". Individual drip rings may be removed easily for quick cleaning. 4 burner top also available.

Selected GOOD DESIGN by the Museum of Modern Art

25 Year Guarantee on burners and cast oven bottom

COMMENDED BY THE CONSUMER SERVICE BUREAU OF PARENTS' MAGAZINE

ACT FAST Dealer Franchises Available!

Chambers Corp., Dept. ALT 452, Shelbyville, Ind.

Gentlemen:

Please send me information on the Chambers Dealer Franchise and name of local distributor. Also include A.I.A. Specification Sheet.

I am an Architect ( ) Builder-Contractor ( ) Dealer ( ).

NAME.....

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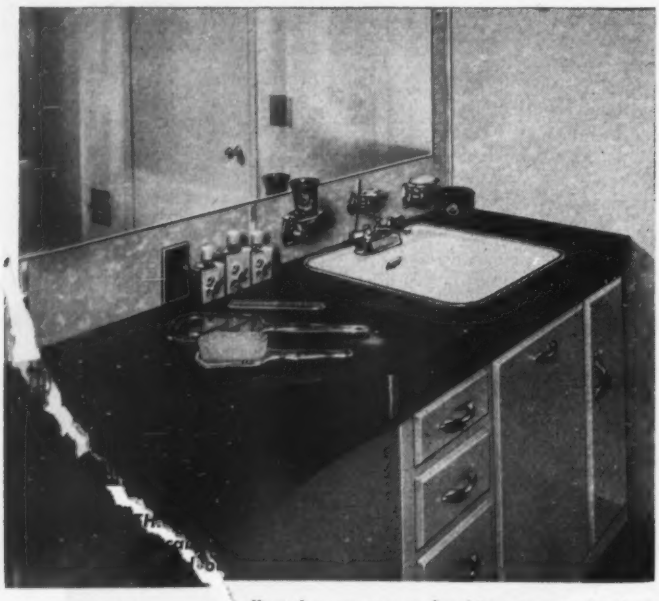


Plastic laminates are excellent for counter and cabinet tops in kitchens and bathrooms because of their ability to resist heat, water, and corrosion.

WALLS of plastic laminates are ideal for the kitchen where frequent severe cleaning is often necessary. Even the area behind the electric range stays new looking.

PLASTIC LAMINATES

Plastic laminates are decorative board products, built up of a series of layers, and utilizing plastics as the core and facing materials. These products are highly durable and decorative, and in the light construction industry have found most general usage as wall lining material in kitchen, bath, and laundry rooms, tops for kitchen and bath cabinets, and for similar applications.

These laminates are fire resistant, unaffected by most acids and hot liquids, with a surface hardness practically impossible to mar or scratch. Thus, they are particularly suited to the above mentioned uses.

Plastic laminates are made in panels ⅛ inch thick. They are bonded to the supporting surface by mastics. And even, heavy pressure is required in order to insure a completely satisfactory bond.

A new development in the field is a plastic laminate bonded to industrial hardboard to make a ¼ inch-thick material for wall paneling and wainscots. It is held in place by moulding strips and mastic adhesive.

Laundry

The modern home laundry is an increasingly important work center for the homemaker. It should be as carefully planned at the kitchen. With the tasteful selection of wall, floor, ceiling treatments and lighting arrangements, the laundry can be made equally attractive.

Because it represents a weekly chore—and occasionally a daily one—the laundry should be located in attractive surroundings with an efficient arrangement of appliances, adequate lighting and the utmost in convenience. The layout should provide ample and convenient space for washing, drying, ironing and storage. The laundry may be combined with the kitchen, be adjacent to the kitchen, be in a first-floor utility room or in the basement.

LAUNDRY LAY-OUT

When the laundry is located in the basement, the prime consideration is that it be directly below the clothes chute and near the basement stairway and outside entrance. It should be generously supplied with daylight and ventilation.

The laundry room should be almost square, approximately 10x12 feet and be constructed with finished walls and ceilings in white or bright colors. Flooring should be finished with asphalt tile or linoleum. Stationary tubs are a requisite. (See Plumbing Section.)

Counter work space may be at the same recommended height—36 inches—as in the kitchen and the tubs adjusted to the same height.

Some washing machines of the rectangular type are built with removable flat tops and adjustable leveling studs to conform to work counter height, making a continuous work surface.

Wall cabinets or open shelves can be of much use for storage, and should be the same dimensions as kitchen cabinets.

Rotary-type washers are usually fitted with quiet rollers permitting them to be shifted easily. If desired, suitable closet space of adequate width and depth can be built to house them when not in use.

Similar procedure can be followed with regard to ironers which are either collapsible, fold-away, or flat-top at counter height.

In planning laundry lay-out, two other considerations which will increase efficiency are:

1. The inclusion of the domestic hotwater heating unit. Its closeness will insure adequate hot water supply. (See Plumbing Section.)
2. The location of proper lighting fixtures over the work areas, and well planned placement of the required electrical convenience outlets.

For laundries adjacent to or a part of the kitchen, all of the suggestions in the preceding paragraphs relating to the general lay-out apply here with two exceptions. These are:

1. Space is usually more restricted and greater compactness is necessary.
2. Space limitation may compel the location of water heater and drying racks in the basement and force the omission of tubs. Space may be planned for electric drying units.

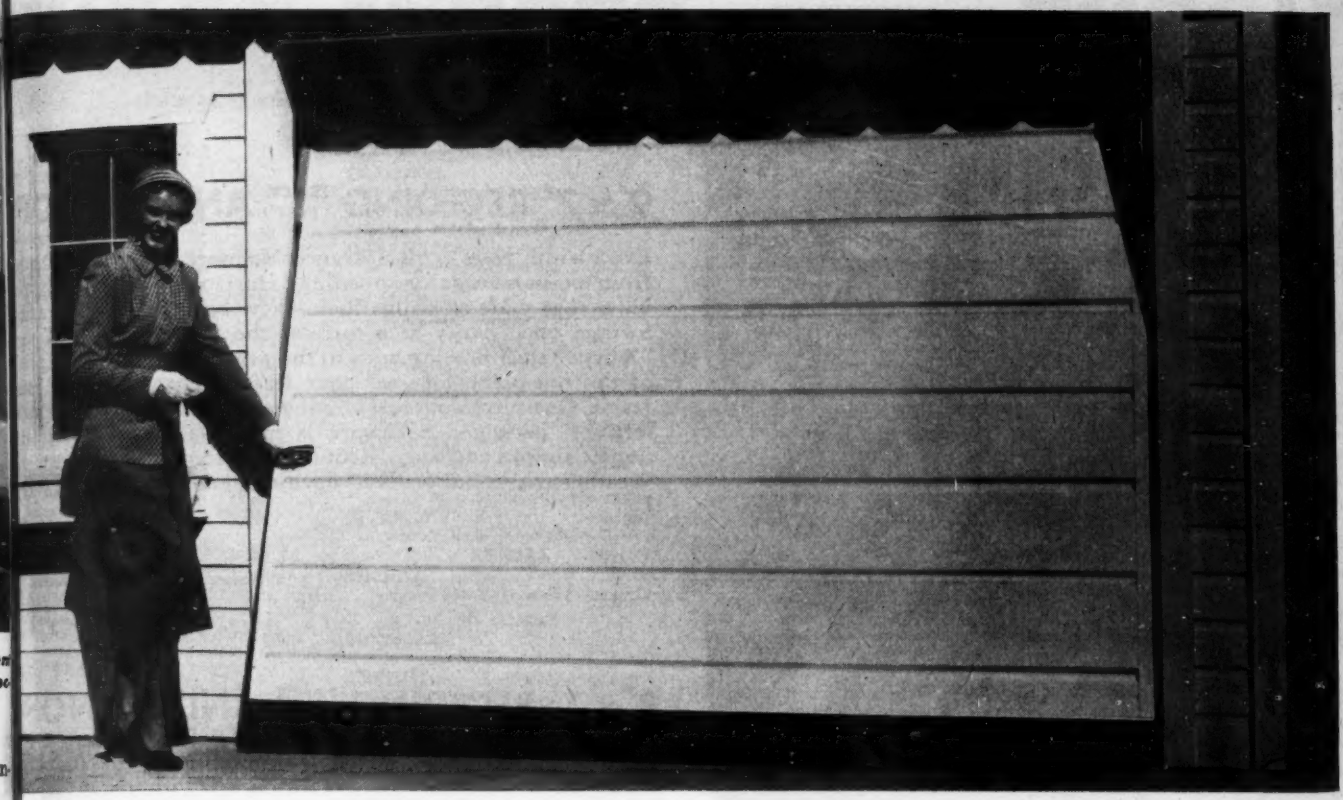
Some of the laundry equipment and items which dealers can sell are:

Laundry Appliances

Electric washing machine	Ironing boards
Electric ironers	Clothes chutes
Electric flat irons	Laundry storage cabinets
Clothes baskets	Wash tubs—portable
Clothes dryers—gas	Wash tubs—stationary
Clothes dryers—electric	Wash boards
Curtain stretchers	Wash boilers
Drain hose—for washers	Wringers
Hampers	Water heaters
Indoor dryers	Water softeners

Other related items usually stored in laundry—

Carpet sweepers	Scrub brushes
Chamois cloths	Wall dusters
Dust mops	Wet mops
Oil mops	Window brushes
Push brooms	Window cleaners
Radiator brushes	Vacuum cleaners



Section 17

Garage Doors and Package Sales Items

THE TERM "package selling" has become more and more prevalent in the building products field in recent years. It is not a new idea of merchandising. Most dealers have practiced it in varying degrees for a long time; for as a method of service it means the supply of materials in the form that the customer will use it.

Some items that are classified as package products require no fabrication or application by the dealer. Others involve the installation of a variety of the products that the dealer carries in order to provide the customer with a complete project in usable form.

Proof that the package selling method fits the consumer demand is borne out by the fact that thousands of specialized applicators have sprung up all over the country who sell such items as roofing, siding, insulation, screen and storm sash, kitchen and bath remodeling, decorating, garage doors, and many others.

These applicators are direct competitors of the building products dealer. They have developed and supplied a tremendous market, and the materials going into these jobs are subtracted from the volume that could have been the dealer's, had the customer been able to get the same service from him.

Far-thinking dealers are giving serious study to the problem of providing package service for the materials they handle both in the new construction and the remodeling and maintenance fields; for the current trend clearly indicates that the mere supply of materials is becoming less and less a necessary function in the building products industry.

On the other hand, the dealer who adapts his operations to provide package service to his customers, both contractor-builders and consumers, will establish himself as an indispensable factor in his trading area, and contribute substantially to the more efficient and economical supply of building products in their complete, usable form.

Essentially, all this implies is for the dealer to develop a means of fabricating, applying, or installing certain materials that he handles, either with his own personnel or in cooperation with sub-contractors, and to provide a financing service that permits the customer to distribute payment over a period of time.

A brief summary of some of the types of package service that the dealer can logically and profitably provide are listed below.

SALES ITEMS

We have carefully selected a number of specialty sales items that many dealers are promoting successfully. Each of these which meets the above six requirements within individual markets should be given careful consideration by the dealer for its additional sales and profit opportunities.

Garages, Garage Doors and Equipment.

During the postwar years thousands of new homes have been built without a garage. This was due to the fact that the emphasis was concentrated on housing during the period when certain materials were in short supply. It was also due to the fact that higher costs caused many purchasers to forego a garage at the offset.

The market for new garages, which also includes doors, hardware, etc. is therefore tremendous. Many dealers have already begun to feature a complete garage as a package, and are enjoying a substantial volume of sales.

In addition to the new garage market, there are a terrific number of existing structures that require constant maintenance and repair. Many of these, built before the innovation of the modern type of door, are in need of just such improvement. A trial canvass in every trading area will soon reveal the potential in replacement doors and hardware.

Supply items include: garage doors of wood and metal; garage door hardware; folding door hardware; overhead door hardware; sliding door hardware; electric door controls.

Manufacturers of unit-doors have developed many effective ways to demonstrate their products; most of them true-to-life installations that permit the demonstration of the door's operation as well as its physical appearance.

While these items are not expensive, sales volume can be substantially increased if the dealer advertises and sells them on a deferred payment basis.

STRAND ALL-STEEL GALVANNEALED OVERHEAD GARAGE DOORS

9′ x 7′ RECEDING TRACK TYPE AND CANOPY

Extra width gives *extra* clearance. No more banged-up fende from too-narrow garage openings. Horizontal-line styling pr vides that wide, spacious look—new beauty for the garag Swings open easily at a turn of the handle. Rugged, ne "X-type" steel bracing adds to the great strength and rigidi of the one-piece, all-steel door leaf. Deeper, stronger, ste frame. One-piece door leaf eliminates field assembly of separa sections; packaged hardware is factory-assembled. Install tion is simple and easy. Requires less than 2" of headroo Weatherstrip at bottom seals opening against drafts and sno

8′ x 7′ RECEDING TRACK TYPE AND CANOPY

New horizontal-line styling adds new beauty to this standard width STRAND Door, and harmonizes with today's archi tecture. STRAND'S 8′ x 7′ Door is available in bot Receding (Track) and Canopy Types. Wider, deeper fram gives greater strength. Ball-bearing rollers and strong adjus able springs assure easy, quiet and smooth operation o Receding Type. Strong adjustable springs do the lifting an permit easy opening and closing of Canopy Type. Require less than 2" of headroom . . . no interference with overhea ties or storage space. Heavy rubber weatherstrip at botto of all-steel panel seals doors against drafts and snow. Can b trimmed to fit uneven floors. Factory-assembled hardwar comes ready to install. Saves valuable installation time.

16′ x 7′ RECEDING TRACK TYPE

The STRAND All-Steel, Horizontal-Lin Track-Type Door for double garages is shipp in two sections (each 8′ x 7′), complete wit necessary joining material and package factory-assembled hardware. This beautif double-width door assures the same easy, lo cost installation, and the same sturdy streng ease of operation, and other advantages STRAND Single Doors. STRAND Doub Garage Door eliminates the cost of buildi a center post—ensures an unobstructed openi 16′ wide—and costs less than two Single Doo

RECEDING (track) TYPE

Swings open easily on ball-bearing rollers and disappears completely inside the garage, when open.

CANOPY TYPE

Provides shelter from sun and rain when open, extending only 16" inside garage.

5 types

for 8′, 9′ and 16′ openings

STRAND JOBBER LIST

ALABAMA

BIRMINGHAM
Birmingham Sash & Door Company

ARIZONA

PHOENIX
Arizona Sash, Door & Glass Company
TUCSON
Arizona Sash, Door & Glass Company

ARKANSAS

LITTLE ROCK
Southland Bldg. Products Co.

CALIFORNIA

FRESNO
Building Material Distributors, Inc.
California Builders Supply Company
Kendall-Addington Company
Pacific Coast Aggregates, Inc.
HAYWARD
Pacific Coast Aggregates, Inc.
OAKLAND
California Builders Supply
Pacific Coast Aggregates, Inc.
Wholesale Building Supply
SACRAMENTO
Building Material Distributors, Inc.
California Builders Supply Co.
Pacific Coast Aggregates, Inc.
SAN FRANCISCO
Pacific Coast Aggregates, Inc.
SAN JOSE
Building Material Distributors, Inc.
Pacific Coast Aggregates, Inc.
STOCKTON
Building Material Distributors, Inc.
Pacific Coast Aggregates, Inc.

COLORADO

DENVER
C. A. Crosta, Inc.
Denver Reserve Supply
GRAND JUNCTION
The Biggs-Kurtz Company

CONNECTICUT

BRIDGEPORT
Asbestos Distributors Corporation
NEW HAVEN
A. C. Bauman, 336 Blake St.

DELAWARE

Contact Detroit Steel Products Company
District Office, Philadelphia

DISTRICT OF COLUMBIA

WASHINGTON
Central Building Supply, Inc.

FLORIDA

JACKSONVILLE
Huttig Sash & Door Company, Inc.
MIAMI
Huttig Sash & Door Company, Inc.

GEORGIA

ATLANTA
Addison-Rudesal Company
MACON
Binswanger & Company
McNair Lumber & Supply Co.

IDAHO

BOISE
Morrison-Merrill & Company
POCATELLO
Morrison-Merrill & Co.
TWIN FALLS
Morrison-Merrill & Company

ILLINOIS

CHICAGO
Reserve Supply Coop. Corp. of Chicago
DANVILLE
Material & Fuel Co.
MT. VERNON
W. C. Alexander Wholesale Supply Co.
PEORIA
A. Lucas & Sons

INDIANA

EVANSVILLE
Indiana Wholesalers, Inc.
FORT WAYNE
Michigan Wholesalers
INDIANAPOLIS
Building Materials Service Division of Capitol Paper Company
SOUTH BEND
E. R. Newland Company, Inc.

IOWA

BURLINGTON
Contact Chicago District Office & Whse.
CEDAR RAPIDS
Contact St. Louis District Office & Whse.
DAVENPORT
Contact Chicago District Office & Whse.
DES MOINES
Contact St. Louis District Office & Whse
SIOUX CITY
Contact St. Louis District Office & Whse.

KANSAS

WICHITA
Wichita Building Material Company, Inc.

KENTUCKY

LEXINGTON
E. H. Straus Company
LOUISVILLE
Huttig Sash & Door Company, Inc.

PADUCAH
Fischer Lime & Cement Company

LOUISIANA

ALEXANDRIA
Davidson Sash & Door Company
BATON ROUGE
Baton Rouge Sash & Door Works
LAFAYETTE
Davidson Sash & Door Company
LAKE CHARLES
Davidson Sash & Door Company
MONROE
Allen Millwork Manufacturing Company
NEW ORLEANS
Cole Manufacturing Company
New Orleans Sash & Door Company, Inc.
SHREVEPORT
Allen Millwork Manufacturing Co.

MAINE

Contact Detroit Steel Products Company
District Office & Warehouse, Boston

MARYLAND

BALTIMORE
Central Building Supply, Inc.

MASSACHUSETTS

Contact Detroit Steel Products Company
District Office & Warehouse, Boston

MICHIGAN

DETROIT
Royal Oak Wholesale Co.
Smith-Orr Company
GRAND RAPIDS
Porter-Hadley Company
JACKSON
Michigan Wholesalers, Inc.
KALAMAZOO
Miller Sash & Door Company

MINNESOTA

ST. PAUL
F. I. Products Company

MISSISSIPPI

JACKSON
Allen Builder's Supply Company
Jackson Sash & Door Company, Inc.

MISSOURI

KANSAS CITY
Rust Sash & Door Co.
ST. LOUIS
Huttig Sash & Door Company, Inc.
SPRINGFIELD
Farm Home & Supply Company

MONTANA

BILLINGS
Building Specialties Company

NEVADA

RENO
Flanagan Warehouse Company

NEW HAMPSHIRE

Contact Detroit Steel Products Company
District Office & Warehouse, Boston

NEW JERSEY

JERSEY CITY
Atlas Steel Products Company

NEW MEXICO

ALBUQUERQUE
New Mexico Company

NEW YORK

BROOKLYN
Heimus Garage Door Company
BUFFALO
Eugene F. Lerch Company
LONG ISLAND
Empire Millwork Corporation
Northern & Willet Pt. Blvds., Corona
Royal Glass Works Corporation
NEWBURGH
Cameron Lumber Company
ROCHESTER
Monroe Builders Supply Company
SYRACUSE
Saltpoint Supply Corporation

NORTH CAROLINA

CHARLOTTE
Huttig Sash & Door Company, Inc.
GREENSBORO
Binswanger & Company, Inc.

NORTH DAKOTA

FARGO
Builders Supply Company

OHIO

CINCINNATI
Acme Sash & Door Company
CLEVELAND
Kinsner Supply Company
COLUMBUS
Huttig Sash & Door Company, Inc.
Morris Door Company
DAYTON
Dayton Sash & Door Co.
MONROE FALLS
Cueni Construction Co.
WARREN
Ohio Glass & Sales Company

OKLAHOMA

ENID
Long-Bell Lumber Co.
OKLAHOMA CITY
Long-Bell Lumber Co.

OREGON

PORTLAND
C. E. Sand Plywood Company

PENNSYLVANIA

PHILADELPHIA
Contact Detroit Steel Products Company
District Office & Warehouse, Philadelphia
PITTSBURGH
Contact Detroit Steel Products Company
District Office & Warehouse, Pittsburgh

RHODE ISLAND

Contact Detroit Steel Products Company
District Office & Warehouse, Boston

SOUTH CAROLINA

COLUMBIA
Binswanger & Company, Inc.
FLORENCE
Binswanger & Company, Inc.

SOUTH DAKOTA

Contact Detroit Steel Products Co., District Office & Warehouse, St. Louis, Mo.

TENNESSEE

KNOXVILLE
Huttig Sash & Door Company, Inc.
Wilson-Weesner-Wilkinson Company
MEMPHIS
Fischer Lime & Cement Company
NASHVILLE
Huttig Sash & Door Company, Inc.
Nashville Sash & Door Company

TEXAS

AMARILLO
The Long-Bell Lumber Company
AUSTIN
Davidson Sash & Door Company
CANADIAN
Santa Fe Sash & Door Company
DALLAS
Huttig Sash & Door Company
EL PASO
Booker-Walker Supply Company
FORT WORTH
Texas Sash & Door Company
HOUSTON
Houston Sash & Door Company
George C. Vaughan & Sons
LUBBOCK
Lubbock Sash & Door Company
NEDERLAND
George C. Vaughan & Sons
SAN ANTONIO
George C. Vaughan & Sons
SWEETWATER
Sweetwater Sash & Door Company
WACO
Stevens Sash & Door Company

UTAH

SALT LAKE CITY
Morrison-Merrill & Co.

VERMONT

Contact Detroit Steel Products Company
District Office & Warehouse, Boston

VIRGINIA

BRISTOL
Bristol Steel & Iron Works
DANVILLE
Binswanger & Company
NORFOLK
Elco Lumber Company, Inc.
RICHMOND
Binswanger & Company, Inc.

WASHINGTON

SEATTLE
Puget Supply Company
SPOKANE
Lumbermen's Supply Corporation
WENATCHEE
E. T. Pybus Company
YAKIMA
Aves Millwork Company, Inc.

WEST VIRGINIA

Contact Detroit Steel Products Company
District Office & Warehouse, Pittsburgh

WISCONSIN

MILWAUKEE
Jackson & Foster

WYOMING

Contact Strand Jobber in Denver, Colorado; Salt Lake City, Utah, or Billings, Montana

●

CANADA

ONTARIO

SARNIA
Belton Lumber Company, Ltd.
TORONTO
Edmund Hind Lumber Company, Ltd.

STRAND GARAGE DOOR DIVISION
DETROIT STEEL PRODUCTS CO. • 2250 E. Grand Blvd., Detroit 11, Mich.

DISTRICT OFFICES OF DETROIT STEEL PRODUCTS COMPANY
Atlanta, Ga. • Boston, Mass. • Chicago, Ill. • Cincinnati, Ohio • Cleveland, Ohio • Dallas, Texas • Los Angeles, Calif. • New York City, N.Y. • Oakland, Calif. • Philadelphia, Pa. Pittsburgh, Pa. • San Francisco, Calif. • Seattle, Wash. • St. Louis, Mo. • Washington, D.C.

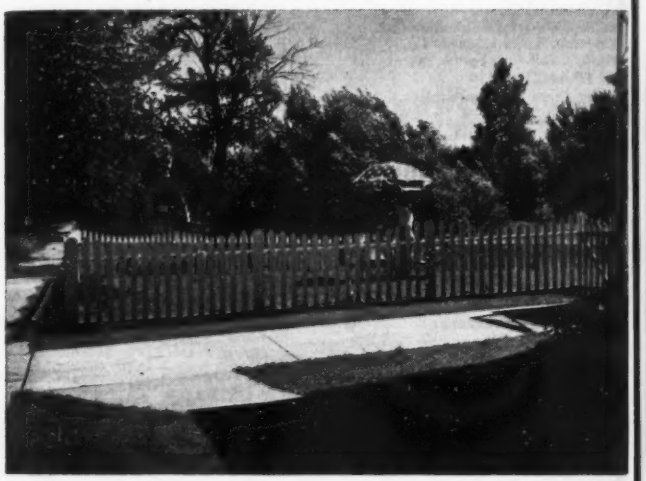
STRAND GARAGE DOOR DIVISION
Detroit Steel Products Company
Dept. AL-4, 2244 E. Grand Blvd., Detroit 11, Mich.
Please send full information about Strand All-Steel Garage Doors for 9' x 7', 8' x 7' and 16' x 7' openings; also send information about a Strand Display Door.

Name .....
Address .....
City .....State.....

THE TREND toward a recreational area in every home, to take wear and tear away from the living room, makes the market for basement improvement very attractive now and in future years.

A HIGH PERCENTAGE of unfinished and expansible homes built during the past five years, offers a big potential today for these unfinished areas to be completed, particularly attics.

UNPAINTED FURNITURE, particularly that which may be combined in a number of ways for different storage purposes is in great demand today. Another perennial good seller is lawn furniture of all types.



DECORATIVE FENCES usually follow a newly constructed home by a year or two. This is the time for many new home owners to consider such an enclosure for their property.

Screens, Storm Windows, Venetian Blinds.

The chances are that in the average dealers' market these items have been neglected promotion-wise. The specialty salesman offering an installed service is welcome at most doors. Weatherstripping is an excellent companion item.

For supply items see Millwork Section.

Insulation—Roofing, Siding, Caulking.

If aggressive specialty selling organizations are not at work or have not recently covered the market, the dealer will find this field especially productive, manufacturers' competition is now at the point where valuable franchises are available to aggressive specialty selling dealers.

For supply items see Roofing Section.

Paint, Wall Paper, Window Valances.

Dealers who sell and apply paint report 400 percent more actual net profit from the paint department than under materials-only sales. This is a steady repeat business that lends itself beautifully to time payment selling.

Many dealers have developed a very satisfactory system of providing home decorating service in cooperation with a local painting and decorating contractor, thus carrying out the package sales program without the necessity of keeping workmen on their own payroll.

See Paint and Wallpaper Section for supply items.

Store Fronts, Plate Glass, etc.

Modernization of main street is the order of the day in many cities. This can be promoted to great profit by the wide awake dealer. In many markets the reason more store fronts are not sold is because no one is asking for the business. Many related sales and much additional volume for other departments will accrue to the dealer who promotes this market.

Termite Controls and Wood Preservatives.

Here is a growing business in areas where insects, fungi, and bacteria attack wood. A natural for the lumber dealer—but important volume can only be secured through creative selling.

See Lumber Section.

Stained Shingle, Side Walls.

Experts say that the important volume in Red Cedar shingles will be in sidewalls. Double-coursing with second grade shingles underneath give a beautiful shadow line and economy simultaneously.

Unpainted Furniture.

If no one in the market is offering these items many a profitable sale may be had by creatively combing this territory.

This particularly applies to kitchen, bath, and corner cabinets, and similar built-in equipment. The trend in new construction toward living-dining room combinations has increased the market for breakfast nook facilities in the kitchen; and the need for maximum space utilization presents an added demand for compact, efficient built-in equipment.

Remodeled homes also offer a source of business in this field, but as is true with most of the items listed on these pages, it is most satisfactorily promoted by active merchandising methods.

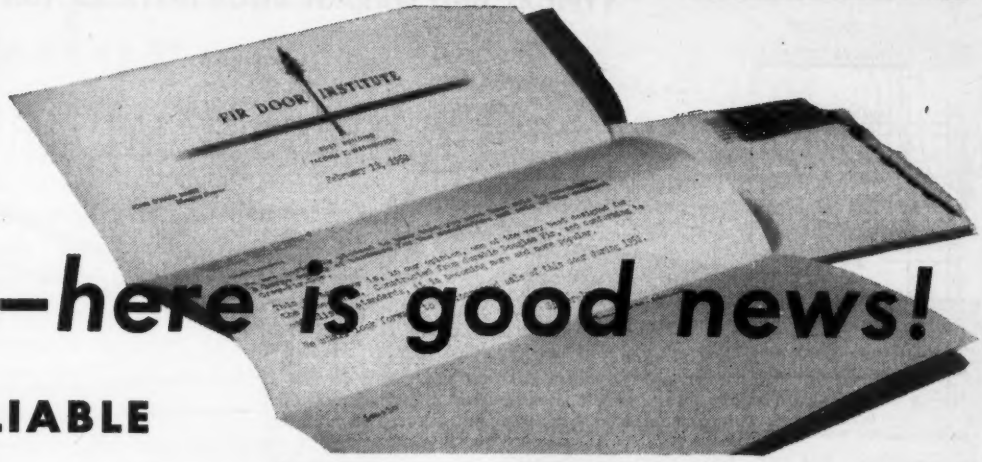
Log Cabins, Lake Cottages, Cabanas and Tourist Rooms.

A specially good item for a dealer in or near a resort area. Many of these can be pre-fabricated in the yard during off seasons and delivered to the site ready for use.

Enclosed Porches.

Many applicators in city markets are doing a good business on this single item. Dealers can offer in conjunction a porch, driveway, and walks repair service.

Jobbers Dealers Builders—here is good news!

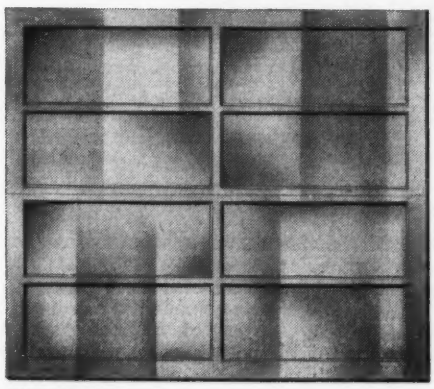


THE RELIABLE

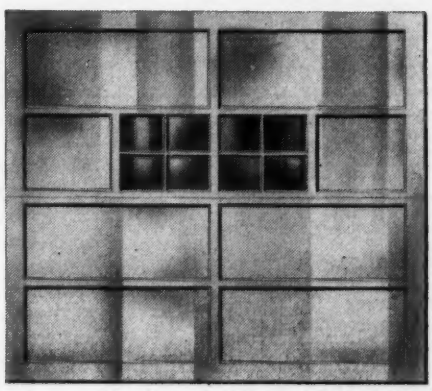
Craw-Fir-Dor

OVERHEAD-TYPE GARAGE DOOR

is available again in *quantity*



Craw-Fir-Door No. 44



Craw-Fir-Door No. 45

Easy-to-use, automobile type lock is furnished with Craw-Fir-Door hardware.

This time-tested favorite is now available in any quantity you need. Immediate delivery is assured for popular Craw-Fir-Dors. Stocks of the easy-working Crawford hardware are now adequate to supply all demands for these units.

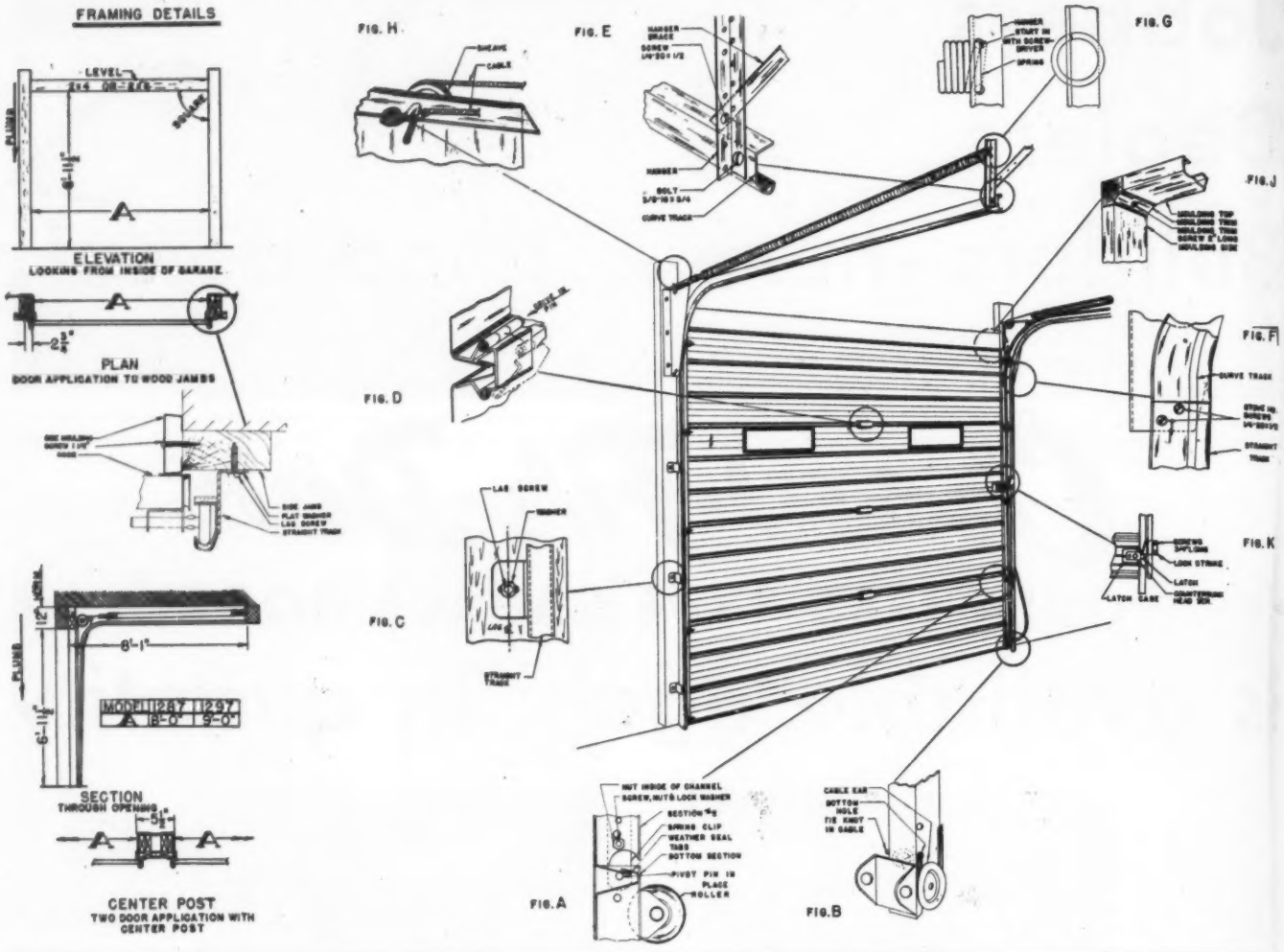
And the same outstanding Craw-Fir-Dor features are also back . . . attractive appearance in 2 styles; Douglas Fir durability, strength and weatherproof panels; automobile-type lock and keys . . . and low cost!

Pre-assembled Crawford hardware requires a minimum of handling and provides quick, easy installation and operation. Only 2″ headroom is needed.

Sold only through lumber dealers, Craw-Fir-Dor is a fast-moving, profit building item . . . profitable for dealer, jobber and builder.

Be sure to include Craw-Fir-Dors in your next order of doors from mills of the Pacific Northwest door manufacturers!

TYPICAL UNIT GARAGE DOOR INSTALLATION



Waste Space Utilization.

Here is another item that could be a business in itself. Nearly every house over 20 years old—there are millions of them—has unused space in attic or basement that could be converted into living or recreational quarters. Additional rooms secured through the conversion of unused space can be had at 20 percent of the cost per room in a new house.

Kitchen, Bathroom and Laundry Remodelling Jobs.

See Kitchen, Laundry and Bathroom Section.

Air Conditioning and Commercial Refrigeration.

A new and almost centered specialty in lumber yards—but one with a consumer demand already built for it. Theatres, stores, etc., with air conditioning have made the public want it. Commercial refrigeration makes an excellent companion promotion.

Tile Flooring.

In metropolitan areas specialty contractors have a profitable business in this item alone. If the dealers market is not serviced he should look into this. It is a coming business in lumber yards. The same dealer salesman could sell hardwood, linoleum and all other types of flooring.

Acoustical Treatments.

Like flooring this is a profitable business for specialty applicators in densely populated areas. In smaller towns the dealers may find it a profit builder.

Lightning Protection Systems: Lightning is one of the greatest causes of farm fires, and the installation of adequate protection systems on farm homes and buildings is essential. Since such assemblies are incorporated on a structure, and the majority of customers regard them as part of the structure, lightning protective systems are a logical item for the rural dealer particularly to sell.

But the need for such systems is not limited to the farm. Urban homes and trees may also be provided with the same protection, to prevent needless destruction by lightning.

Considerable improvement has been made in present day systems over the old, familiar lightning rod. Modern, thoroughly effective systems are now made that are practically invisible. Aluminum, because of its excellent electrical conductivity, and its inherent ability to resist corrosion, has become very popular as a metal for the fabrication of lightning protective systems.

As is true with many other package products now distributed through building products dealers, however, the volume of business developed and the profits derived, depends on the promotional effort devoted to them. Lightning protection systems are one of the easiest lines to sell, particularly if they are handled as a promotional item.

Hardwood, Plywood, Veneer and Hardwoods.

An item that goes well with the promotion of home work shops. With ever increasing leisure American families are constantly on the lookout for pleasurable and profitable ways to use their spare time. Light industries, farms, schools and institutions are good prospects too!

Rustic and Decorative Fences.

Some dealers have found this an extremely profitable item, almost a department in itself. One dealer sold $20,000 volume on this item alone in a single year! It goes nicely with Lawn and Garden items, driveway and walk improvements, repairs, etc.

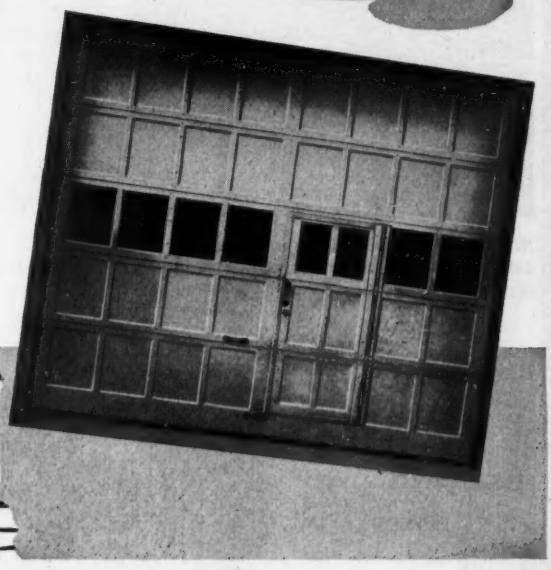
Incinerators, Fire Extinguishers, Wall Safes

The abler type of specialty salesman has been able to make a living on most of these items for years. The dealer who uncovers how his customers supply their needs for above may find they are not supplied—and if not why not sell them?

How-ell-dor
GARAGE DOORS for Industrial America

Every sectional Upsweep How-ell-dor is engineered for the job . . . prefabricated for ready installation. There are 36 stock sizes of commercial and residential How-ell-dors, up to 30′ wide; odd sizes and unusual designs are a specialty. New! Fre-Flyte Commercial Door, 10′ x 10′ x 1⅝″ stock size.

- **New, improved NO SAG WICKET DOOR.** 12 gauge steel hinge full length of wicket door, which is fitted and bolted to parent door at factory. Insures a durable, precise fit, a 75% time and labor saving on the job.



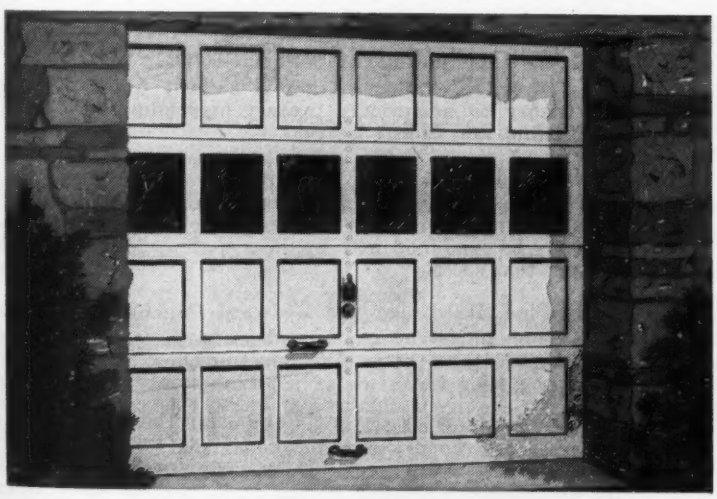
How-ell-dor ELECTRIC OPERATORS

Four types . . . eleven models. Push button control available for any size of sectional type door. Latest residential operator requires no extra headroom.

Write for FREE CATALOGS

THE HOWELL MANUFACTURING CO., 7200 Hasbrook Avenue, Phila. 11, Pa.

CALDER *WedgeTight* OVERHEAD DOORS



32 STOCK SIZES TO DRAW FROM

Door Size	Section Open for Glass	Approximate Shipping Weight Lbs.
*8′x6′6″x1⅜″ Sturdy Door	4th	180
*8′x7′x1⅜″ Sturdy Door	3rd	185
**9′x6′6″x1⅜″ Sturdy Door	4th	195
*9′x7′x1⅜″ Sturdy Door	3rd	200
8′x6′6″x1⅜″ Standard Wood	4th	190
*8′x7′x1⅜″ Standard Wood	3rd	202
8′x7′x1⅜″ Standard Wood	4th	202
8′x7′x1¾″ Standard Wood	3rd	220
8′x7′x1⅜″ Standard Wood	Solid	205
*8′x7′6″x1⅜″ Standard Wood	3rd	210
2′x8′x1⅜″ Standard Wood	3rd	228
*8′x8′x1⅜″ Standard Wood	4th	228
8′x8′x1¾″ Standard Wood	3rd	240
*9′x7′x1⅜″ Standard Wood	3rd	215
10′x7′x1¾″ Standard Wood	3rd	255
10′x8′x1⅜″ Standard Wood	3rd	250
10′x8′x1¾″ Standard Wood	any except No. 1	290
10′x10′x1⅜″ Standard Wood	3rd & 4th	330
*10′x10′x1¾″ Standard Wood	any except No. 1	385
10′x12′x1¾″ Standard Wood	any except No. 1	480
10′x14′x1¾″ Standard Wood	any except No. 1	575
12′x8′x1¾″ Standard Wood	any except No. 1	310
12′x10′x1¾″ Standard Wood	any except No. 1	425
12′x12′x1¾″ Standard Wood	any except No. 1	540
12′x14′x1¾″ Standard Wood	any except No. 1	655
14′x7′x1⅜″ Standard Wood	3rd	365
14′x7′x1¾″ Standard Wood	3rd	400
*15′x7′x1⅜″ Standard Wood	3rd	385
15′x7′x1¾″ Standard Wood	3rd	420
**16′x6′6″x1⅜″ Standard Wood	4th	390
*16′x7′x1⅜″ Standard Wood	3rd	395
*16′x7′x1¾″ Standard Wood	3rd	435

*Also available from Decatur, Illinois warehouse stock.

**Available from Decatur only.

All Sectional Doors

Easy to Install and Operate
Wedge Tight Doors for a Wall Tight Fit

Residential • Commercial • Industrial • Flush Panel
Chain Lift • Electric Operators • Radio Control

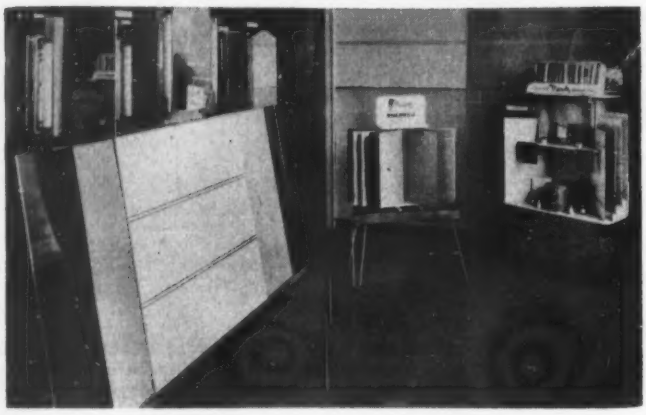
CALDER MANUFACTURING CO., Lancaster, Pa.

All Special Sizes Made to Order

For information on Flush Panel Doors, High Lift Doors, Pass Doors, Aluminum Doors or Electric Operators (radio control) write for catalog.

KITCHEN REMODELING presents a steady potential for the sale of cabinets, wall and floor coverings, fixtures of various types, and even appliances. This is a type of home improvement best sold as a package.

MODERN FIREPLACE units that circulate heat throughout a room or group of rooms have proved far more effective than the old type. It is a feature that should be included in older homes undergoing major remodeling, as well as new ones.



THIS ATTRACTIVE display of prefinished hardboard and bathroom cabinets immediately conveys the idea of cleanliness and beauty when installed in a home. They are excellent consumer items.

EMPHASIS ON home comfort has placed insulation in the position of a necessary part of every home. Attic insulation is another project that the average home owner can easily do himself.

Sanitation Chemicals and Sewage Treatments.

Here is a badly needed consumer service that is both badly needed and not adequately covered in many markets. A Real Opportunity!

Floor Renewals.

A complete Floor Service could be sold as a specialty item—Floor sanding and polishing, floor coverings, asphalt tile, pre-finished hardwood flooring, linoleum, etc.

Attic Expansion and Ventilation.

Many attics provide space for an extra bedroom or two, a playroom or studio. This item can be combined with attic ventilation and insulation in a specialty sale.

Timber Connectors.

Every year there is increased utilization of the ingenious aids to heavy construction. Dealers with market needs in the areas of roof trusses, bridges and heavy construction, poles, cross arms, glued construction and prefabricated housing should write Timber Engineering Company, 1319 Eighteenth Street, Washington, D. C., for data covering this field.

Indoor and Outdoor Fireplaces.

Through manufacturers' research in recent years, successful fireplaces are an exact science. Dealers can approach the market on a specialty basis with complete confidence in adequate producers' support.

Recreation Rooms, Play Quarters and Refreshment Bars.

Every home with a dry unused basement space is a potential for this type of specialty sale—An extra profitable item for winter time sales.

Adhesives.

The progress in glues and adhesives in recent years has been so marked that it is almost possible to bind any material to another in such a manner that the combined unit is stronger than either. The forward-thinking dealer will be the local adhesive specialist.

Asbestos, Asphalt and Aluminum Sidewalls.

The coverage of this market is a must for the dealer who wishes to adequately protect his competitive area. See Roofing and Siding Section.

Frozen Food Lockers.

This item might be treated as a selling specialty itself if the local opportunity is not being completely covered—or it may be combined with appliance, air conditioning and refrigeration sales.

Knotty-Pine, Hardwood and Redwood Paneling.

The demand for charm and beauty in interior walls make these items a profit opportunity. The literature available makes these woods especially easy to promote.

Shelf Units, Radiator Covers, Expansible Cabinet Units.

Lumber and wood working producers are refining these products more every year. These refinements often provide exceptional specialty selling opportunities to dealers.

Shower Cabinets and Wall Tile of Asbestos, Plaster, Metal and Clay.

This is typical of the possible combinations in specialty selling.

Specialty selling is package selling—wrapping up the labor and materials in the project and delivering a completed unit to the customer ready for use.

Summarizing, the opportunity for specialty selling is wide open in small, medium and metropolitan marketing areas. The dealer may cut his "line" and "staff" to his individual potential.

Section 18

Plaster and Plastering Products

Plaster, as commonly understood, consists of a plastic mortar mixture applied as a surface treatment either to the interior or exterior. In fact, plaster has many of the attributes of plastics, since it is shaped and formed while wet and can be made to conform with an infinite number of styles, surfaces and lines.

(A brief description of some of the advantages of lathing and plastering is found in the booklet, "What You Should Know About Modern Lathing and Plastering," published by the National Foundation for Lathing and Plastering, Inc., Chicago.)

Plaster Composition

There exists a sharp division between the two primary classes of plaster composition based on the cementing material and, because each of these two possess specific qualities which make their use for certain treatments mandatory, they will be treated individually in the following paragraphs.

One group of the cementing materials used is classified as gypsum and processed for various requirements in a large number of brand identifiable packages.

The other cementing material is portland cement which is likewise manufactured for various requirements and sold in innumerable brand identifiable packages.

Lime is a third cementing material used in plaster which, due to its physical properties and also due to the development in the processing of gypsum and portland cement, has declined in use in plastering and today is used primarily as a finished material or an admix with one of the other two cementing materials to improve plasticity in certain conditions.

Lime is available on the market either hydrated or quick, packaged or in bulk. It likewise is processed and packaged with many identifiable brand marks.

Space does not permit the inclusion of the historical development of either gypsum, portland cement, or lime. However, it can be most definitely stated that the continuous painstaking research conducted by the Industry Institutes as well as the technical laboratories maintained by individual manufacturers has resulted in the production of an excellent group of building industry products which, if properly selected and used in accordance with either American Standards Association—Standard Specifications for Gypsum Plastering, including Requirements for Lathing and Furring, A42-46, or individual manufacturer's specifications, will provide lasting consumer satisfaction.

Plastering Considerations

In plastering it is necessary to (a) have the plaster bond to the base, (b) cover all irregularities and secure a true and level surface, and (c) obtain a smooth, clean, hard surface that is pleasing in itself or can be further decorated with paint, enamel, calcimine, or wall paper. Wet, unset plaster is weak and so if applied in too thick coats will slide on the side walls and drop from the ceiling. Further, heavy coats give rise to shrinkage and drying problems.

Two and Three Coat Work

These considerations make so-called two and three coat work necessary. Three coat work as the term implies means three separate coats. The first is called the scratch coat, the second the brown coat, and the third, the finish coat. In three coat work, the scratch coat is raked and cross raked before setting. It is allowed to set and become nearly dry before the brown coat is applied.

In two coat work, the base coat plastering is applied in such a manner as to be considered one coat, and the finished coat applied to this is considered the second coat. The base coat may be applied either by troweling on the base coat plaster to the full thickness of the plaster grounds at one time, striking off of the rod and darbying; or by a double-up method in which the plaster is scratched onto the lath base and the plasterer immediately comes back over the wet, unset scratch coat with a second application, filling the plaster up to the full ground thickness, then striking off with a rod and darbying preparatory to the finish coat.

The scratch coat's primary purpose is to bond to the plaster base, providing a good base for the succeeding work. The brown coat, having a good base in the scratch coat, is inserted to build up the surface, making it true

THREE COAT plaster consists of a base or scratch coat, a brown coat, and a finish coat. These are shown above from left to right, over metal lath.

and level. The finish coat provides a pleasing surface of good wearing qualities.

Base coat plasters used for scratch and brown coats include the following: neat gypsum, fibered and unfibered; ready-sanded gypsum plasters; wood-fiber gypsum plaster and bond plaster.

Job conditions usually determine whether the work should be done by the two-coat or three-coat method, but more important than the number of coats is that the plaster shall be of adequate thickness.

Minimum thickness recommended for lath bases including gypsum, fiber, etc., is one-half inch; for masonry bases ⅝ inch; for metal and wire lath, and wire fabrics ⅝ inch; while for monolithic concrete ceilings the minimum thickness is ⅛ inch and the maximum thickness ⅜ inch.

PLASTER and PLASTER PRODUCTS

Plaster is the most widely used of all materials for the covering of walls and ceilings of the interior of houses. Its advantages are:

1) Provides a smooth, seamless walls and ceilings that are structurally sound.
2) Affords an ideal base for practically every type of decoration.
3) Fire resistant. Will not burn.
4) Can be moulded to suit any interior design.
5) Economical in the initial application.
6) Low in upkeep.

Base Coat Plasters—For use for scratch (first) and brown (second) coats on all standard plaster bases, such as gypsum lath, insulating lath, wood lath, metal lath, clay or gypsum tile, brick.

On metal lath and masonry surfaces it is not advisable to put on too heavy a base coat at one operation. So, first, a light coat is applied and allowed to dry to provide a good base for the second coat. The purpose of the second coat is to build up the surface, making it level and true for the finish coat. On other plaster bases, the two operations are combined into one.

Compound—Also called cement plaster, neat goods, etc. When fibred it is mixed with manila, sisal or goat hair at the mill. This is the plaster that is most used. It gives the maximum coverage per ton and is the most economical to use in communities where good sand is available. Two parts sand, by weight, to one of plaster is used over all plaster bases except brick, tile and gypsum tile which requires three parts sand to one part of clay plaster.

Sanded Gypsum Plaster—Also called hardwall, prepared plaster, etc. Recommended for use in communities which do not have good sand. Selected dry sand is added to the neat gypsum plaster and thoroughly mixed at the mill. Its use prevents the over-sanding of neat gypsum plaster on the job which occurs frequently in its use by unskilled plasterers. Its use in the winter avoids the troubles that arise from frozen sand. Costs a little more than neat plaster.

Wood Pulp Plaster—Also called pulp plaster, wood fibre. This plaster is the choice of most experts for plastering their own homes. It has all the advantages of neat gypsum plaster and hardwall plus the maximum quantity of gypsum per yard of wall. It stands vibration better, holds nails and screws better and has more strength. However, it costs more in place on the wall than the other two above mentioned plasters. Shreds of selected wood fibres are mixed at the mill in this plaster to take the place of sand. It is necessary only to add water in order to use it. Wood pulp plaster is excellent to use to make repairs to existing plaster jobs.

Finish Coat Plasters—For use in the final coat of plastering. The finish coat provides the pleasing surface of the plaster. It is sometime called to as the "white coat", because the most common finish is Finish Hydrated Lime which is guaged with gypsum (plaster of Paris) in the proportions of four parts of lime to one part of gauging plaster. It is usually applied in two coats: a buttering coat to level the surface, and before this has a chance to set, a finish coat. As soon as these coats begin to set and water is drawn from them into the base coat, final troweling with a small amount of water is used to compress the surface, add polish, and prevent shrinkage cracks. It is usually applied ⅛" thick.

Hydrated Finish Lime.—The finish coat generally consists of finishing lime putty gauged with 25% gauging plaster. The lime is soaked with water for 12 or more hours. The lime is added to water by passing it through a course screen to break up the particles and produce a putty evenly permeated with water. Gauging plaster is added at the point of plastering. Lime gives the finish coat whiteness, plasticity, long working qualities and produces a highly polished surface.

Gauging Plaster—(Plaster of Paris). Designed for use with Hydrated Finish Lime for the "finish" coat of plaster. It is used to counteract the shrinkage of the lime. Fast setting gauging plaster is a finely ground, high purity gypsum with no retarder or accelerater. Slow setting gauging plaster contains a mill mixed retarder.

Prepared Finish Plaster—Requires only the addition of water, then is ready for use. It is made in trowel finish and sand float finish.

Keene's Cement—Whenever a wall finish is needed that requires extreme durability and whiteness, Keene's Cement is used. A medium hard finish may be secured by mixing 2 cu.ft. of lime putty to 1½ cu.ft. of Keene's Cement by volume. A hard finish is secured by mixing one part lime putty to three parts Keene's Cement.
Retarder—Chemical agent to slow up process of hardening in plaster.

Special Plasters:

1. Bond Plaster—a specially prepared plaster designed to stick to concrete surfaces.
2. Moulding Plaster—designed for general casting work such as ornamental plastering.
3. Acoustical Plaster—a specially mixed gypsum plaster to absorb sound within a room.

Pittsburgh Steeltex

Positive reinforcing for plaster, stucco, masonry veneer, roofs and floors

PLASTER
(Interior walls and ceilings)

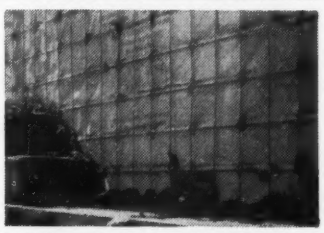
Steeltex for Plaster (Type A) is a 2" x 2" welded wire fabric secured to a special absorbent backing. Corrugations in the wire mesh give the Steeltex sheet board-like rigidity. The backing is absorbent enough to hold wet mortar in place until it has set about the reinforcing wires.

STUCCO

Steeltex for Stucco is 2" x 2" mesh of welded wire reinforcing fabric secured to a waterproofed backing made of a double layer of paper, with layers cemented to each other by a layer of mastic compound.

C-214 and C-216 (Self-Furring) reinforcing fabrics are welded wire meshes without backing. C-214 is made of 14-gauge and C-216 is made of 16-gauge wire. They may be applied over wood or composition sheathing in new construction or over any type of old exterior walls for remodeling work.

MASONRY VENEER

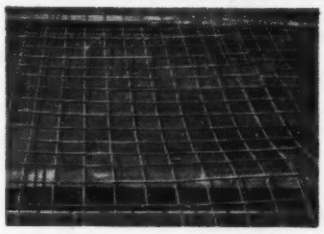


Steeltex for masonry veneer is a combination of welded wire reinforcing fabric (2" x 2" mesh) and specially designed waterproofed backing. The backing is attached to the fabric by crimped stitch wires which permit it to fall away from the steel for automatic embedment of the reinforcing fabric.

FLOORS and ROOFS

Steeltex Floor Lath is composed of steel wire reinforcing mesh (3" x 4") which is attached to a tough cord-reinforced water resistant backing by means of crimped stitched wires which also properly space the reinforcing mesh to permit complete embedment of the reinforcement in the slab.

WELDED WIRE REINFORCEMENT



Pittsburgh reinforcing is an electrically welded wire fabric of square or rectangular mesh, adaptable to a number of uses such as sidewalks, driveways, floors, retaining walls, column and beam wrapping, fireproofing of steel frameworks and many others.

Write Dept. AL for descriptive literature or see our file in Sweet's Catalog

Pittsburgh Steel Products Company

A Subsidiary of Pittsburgh Steel Company

Pittsburgh 30, Pa.

Perlite Plaster Aggregate

Perlite Plaster Aggregate consists of expanded perlite sized for use in light weight fire retardant plaster.

Notable public buildings such as the Senate and House Chambers in the nation's Capitol, tall office buildings, large housing developments and commercial structures have been successfully plastered and fireproofed with perlite gypsum plaster.

For scratch and brown coats, the aggregate shall conform in particle size to the requirements of the standard specifications for sand for use in plaster (ASA A42.1), except that the minimum retained on a 100 mesh screen shall be decreased from 95 to 90 percent.

The Institute's specification follows the above and limits the density to not less than 7 or more than 12 lbs. per cu. ft.

The Perlite Institute has adopted the standard mix proportions set up in ASA A42.1 for gypsum plaster.

a) Three-coat work: First or scratch coat on all types of lath—2 cu. ft. perlite to 100 lbs. of neat gypsum plaster.
First coat on masonry surfaces except monolithic concrete and second or brown coat in all three-coat work—3 cu. ft. of perlite to 100 lbs. of gypsum plaster.

b) Two-coat work: On all bases except wire, metal or wood lath and monolithic concrete—2½ cu. ft. of perlite to 100 lbs. of gypsum plaster.
Double-up method over masonry—3 cu. ft. of perlite to 100 lbs. of gypsum plaster.

Perlite has adequate compressive strength for general use. The high degree of resiliency insures less cracking due to movements of the structure. Perlite plaster weighs one-third of sanded plaster. For 100 sq. yds. ½-in. thick the saving in dead load is about one ton. This enables the plasterer to maintain his speed for the full working day. The fact that the aggregate comes to the job in bags simplifies mixing and reduces waste and mess necessary when bulk sand is used.

Vermiculite Insulating Plaster aggregate—The product has come into great popularity within the last few years as a substitute for sand in plaster. Because of its lightness and greater workability, it can be applied more rapidly and with considerable saving in labor over ordinary plasters.

As a plaster aggregate it is sized to the size of particles of sand. Each sack contains about 4 cubic feet and weighs approximately 28 pounds.

Advantages—Ideal for winter time use. No danger from frozen sand. Applied more rapidly with considerable saving of labor. Fireproof—twice as effective as ordinary plaster. Provides five times the insulation value of sand. Lightness—one tenth the weight of sand. Absorbs sound more readily than ordinary plaster. Provides more resistance to cracks.

To Estimate: Usual mix 1 to 2. (½ Sack Zonolite to 1 sack plaster.) 2-1/3 sack Compound and 6-2/3 cu.ft. of aggregate will cover 100 sq. yards of surface ⅛ inch thick. If thickness of plaster is to be ⅜" thick, multiply above quantities by 3.

TO ESTIMATE:

All plastering is estimated on the basis of a square yard.

To find the number of square yards in a building, first determine the total area of the ceiling by multiplying the width of the building from inside to inside of the exterior walls by the length of the building from inside to inside of the exterior end walls. To this add the total area of the exterior walls and partitions which is found by multiplying their total length by the height of the walls. (Remember that partitions are plasterered on both sides). No deductions are made for openings unless they are larger than usual. Divide the resulting total by 9 to find the number of square yards.

The quantities of the three types of plaster required to plaster 100 sq. yds. of surface ½" thick over the different plaster bases is given in the following table:

The typical dealer's masonry shed (above) provides dry storage for these products. The shed is usually built at dock height for efficient handling.

Approximate Coverage in yards per Bag

Plaster Base	Wood Lath	Metal Lath	Gypsum or Insulation Lath	Mixture
Neat 100 lbs.	10	6	11½	1 Neat-2 Sand
Sanded 100 lbs.	3¼	2	3¾	Water only
Wood Fiber 100 lbs.	4¾	3	6	Water only
Finish Lime 50 lbs.	15 yds.			Mix 6 gals. water per sax allow to stand overnight.
Gauging Plaster 100 lbs.	45 yds.			Mix 4 parts lime putty to 1 part gauging plaster.

PLASTER BASES

Wood Lath—The use of wood lath as a plaster base is fast disappearing because of the superior advantages of manufactured plaster bases.

Application—Wood lath (⅜x1½x48") are spaced ⅜" apart at the edges, ¼" apart at the ends, and nailed securely at right angles to wood supports (spaced not to exceed 16" o.c.) with 3d fine, No. 16 gauge blued nails, full driven. Joints are broken every seventh lath. Lath do not run through from one room to another.

Gypsum Lath—A sheet lath consisting of a gypsum core enclosed in tough, long-fibred paper. The paper backing covers the rounded long edges while the short edges are cut square. Manufactured in two sizes—16"x32" and 16"x48"—and two thicknesses—⅜" and ½".

Advantages:

1) Structurally strong, adds bracing strength.
2) Strong plaster bond.
3) Won't buckle or warp.
4) Easily handled, quickly cut and applied.
5) Resists plaster cracks.
6) Non-combustible core provides fire protection to wood framing.

Special types of Gypsum Lath

1. Perforated Gypsum Lath. Holes are punched into plain gypsum lath to provide a mechanical key for plaster in addition to the surface bond to qualify the lath for a one hour fire rating.
2. Insulating Gypsum Lath. The application of a metal foil to plain gypsum lath gives it the insulating value of half-inch insulating board. At the same time it provides an excellent vapor barrier.

PLASTER TROUBLES AFTER APPLICATION

IF PLASTERED WALL IS:	THE TROUBLE IS:	REMEDY:	TO PREVENT TROUBLE IN FUTURE:
Soft, white, chalky particularly over openings. Hot weather condition.	"Dry Out." Plaster dried before setting.	Spray walls with clean water. Keep wet till set.	Screen openings. Wet lath and floors. Avoid thin coats. If plaster slow set use accelerator.
Damp. Soft. Winter condition.	"Sweat Out." Plaster holds water and "rots."	After plaster is set open doors and windows. Supply heat.	Allow ventilation to hasten drying after plaster is set. Supply artificial heat in cold weather.
Soft, resembling sweat out — rooms have been at freezing temperature.	Walls are frozen.	Throw open building. Let walls freeze dry.	Keep walls from freezing until plaster is dry or at least 24 hours.
Soft, not due slow set or hot weather or retempering plaster.	(1) Too much sand. (2) Too fine sand.	None	(1) Measure sand accurately. Do not use over 3 parts by weight. (2) Use other sand.
Wood lath. Cracks or bulges horizontal with lath. Straight vertical cracks.	Due swelling poor grade of lath or improperly spaced or failure to wet down. Failure stagger joints.	Remove and replaster.	Use No. 1 lath, white pine, cypress or spruce free from bark, sap, or knots. space ¼" to ⅜" apart. Stagger. Wet lath before plastering.
Gypsum lath. Cracks around joints.	Too thin coat.	Apply second coat.	Use proper grounds.
Metal lath. Sags, cracks, does not adhere.	Too light lath, too open spaces, plaster not double fibered. Plaster over sanded.	Reapply	Correct conditions mentioned.
Brick or tile. Small cracks.	Failure wet before plastering. Too little sand. One coat work.	Float crack or apply more plaster.	(1) Wet tile before plastering. (2) Use 3 parts sand. (3) Two coat work.
Concrete. Poor bond.	Use of improper plaster. Unprepared surface.	Remove loose plaster. Condition wall. Apply bond plaster.	Surface must be rough, clean. Use concrete bonding coat.

Application—Gypsum lath is securely nailed to wood supports (spaced not to exceed 16 inches on centers) at intervals not to exceed 4 inches with No. 13 1⅛", ⅜" flat head blued nails. The nails are driven with the under side of the head flush with the face of the lath. Joints between the walls and ceilings are staggered. Lath are applied with the long dimension at right angles to the framing members with joints broken in each course. Lath are not butted tightly together nor spaced more than ¼" apart.

To estimate: The area to be covered is the number of feet required as no deductions are made for door or window openings. Nine pounds of the above mentioned nails are required to erect 1000 sq. ft. of gypsum lath.

Insulation Lath—Insulation lath are growing in popularity as a plaster base, as they provide an important amount of insulation efficiency on outside walls at a cost of only the difference between the material cost of gypsum lath and insulation lath. They are manufactured in plain pieces 18"x48"—½", ¾" and 1" thick. The edges are either shiplapped or v-jointed.

Advantages:

1) Adds heat insulation at little cost, as it provides five times the insulation value of ⅜" gypsum lath.
2) Adds sound insulation. Cuts down outside noise and room-to-room sound transmission.
3) Lightweight, and easy to cut and fit.
4) Special joints to reinforce the plaster at all joints.

Application—Insulation lath is nailed securely to wood supports (spaced not to exceed 16" o.c.) at intervals of not more than 4½" with blued or bright nails of the following sizes:

For ½" lath—1¼ blued, 13 gauge, ⅞ head nails or 4d box nails.
For 1" lath—1¾" blued, 13 gauge, ⅞ head nails or 6d box nails.

To estimate: Do not add any percentage of waste to the gross area to be covered, as door and window openings are not deducted.

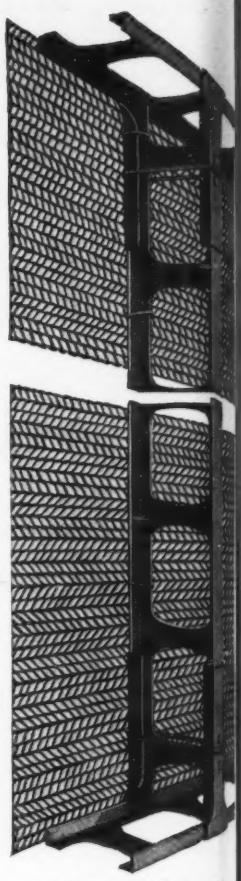
Metal Lath—Metal lath provides the best plaster base but at a considerably higher cost. It resists cracking forces with its greater strength and provides greater protection from fires. Metal lath is manufactured in many designs, but the two most commonly used are Diamond Mesh Lath and Z-rib lath. Choice between these two types of lath is largely a matter of personal opinion. Z-rib costs slightly more than diamond mesh lath, but it provides stiffer construction. There is some saving in plaster in its use as there is less flexing under the application of plaster. Its additional rigidity, produced by the ribs, permits the use of lighter weight lath on the same spans.

Application—Diamond mesh lath is attached to horizontal wood supports (ceiling) with not less than 6d common nails or 1¼" roofing nails driven to a penetration in the wood of at least 1 inch; on vertical supports (sidewall) attach with not less than 4d common nails or 1" roofing nails driven to a penetration of at least ¾ inches. The common nails should be bent over to engage at least three strands of lath. The lath should be lapped ½" at the sides and 1" at the ends. It should be nailed at least every 6 inches.

To Estimate: To cover a 100 sq. yards of surface requires 105 sq. yds. of metal lath. Seventeen and a half pounds of 6d com. nails will be needed. A carpenter will erect 105 sq. yds. in 8 hours.

TRUSCON METAL LATH AND COMPLETE ACCESSORIES

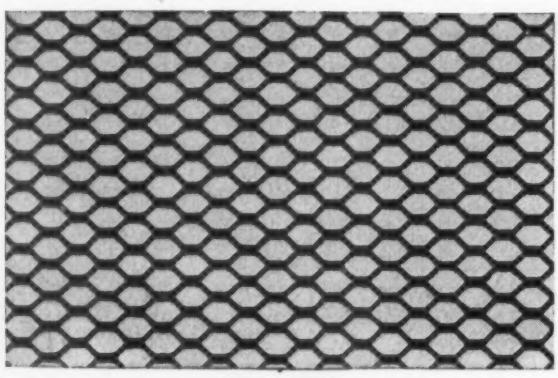
Meet Modern Construction Needs



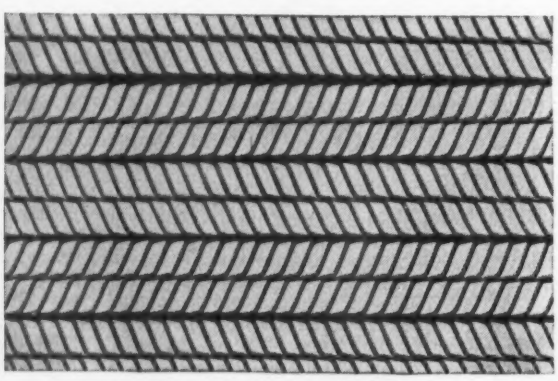
Hollow Partition Studs

Truscon Metal Lath is the plaster base for walls and ceilings that meets all the requirements of modern construction. It is easy to erect and work over, yet is capable of being formed into unusual shapes for arches, coves, plaster fireplaces, and curved walls and stairways. Truscon Metal Lath actually grips the plaster, locking it around the strands of steel which form the openings, holding the plaster in place, even though subjected to violent shocks and vibration.

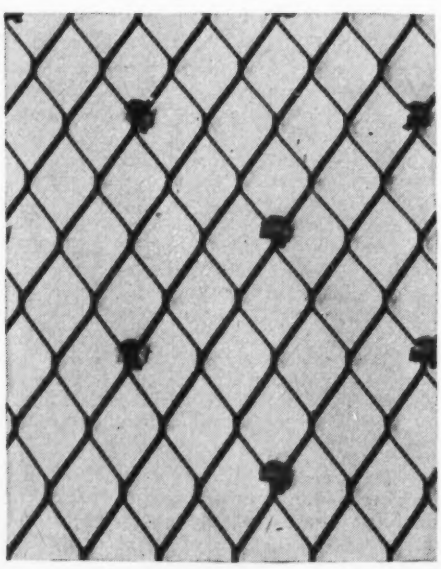
It is further significant that building codes in all principal cities specify Metal Lath in such structures as schools, hospitals, theatres, and buildings in congested areas, for the fire-resistive qualities it affords. Underwriters Laboratories tests show that wood construction with a protective finish of Metal Lath and plaster is safeguarded against the attack of destructive fires for well upwards of one hour. Plaster calcines, when subjected to sufficient heat, loses its hardness and becomes powdery, but even though calcined, if held in place by Metal Lath, offers an effective barrier against fire.



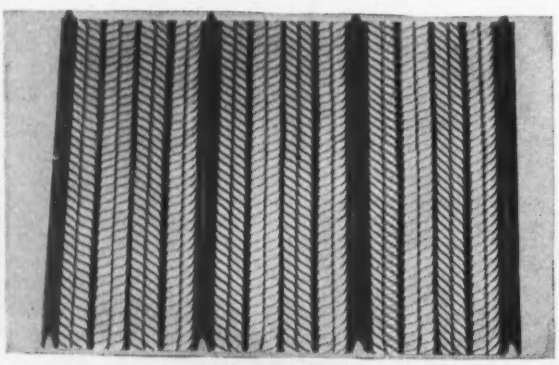
Diamond Lath



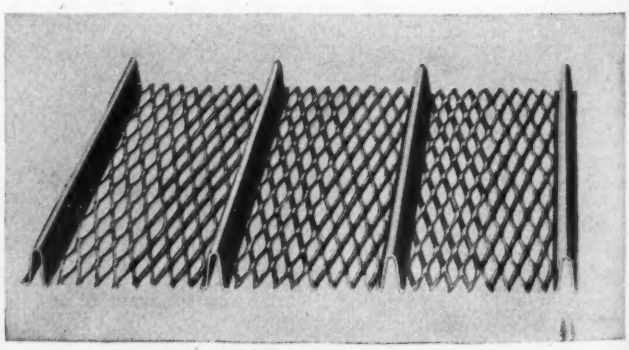
Herringbone Doublemesh Lath



Stucco Mesh



⅜-in. Ribplex Lath



Self-Centering Lath

METAL lath attached to wood studs in typical house construction.

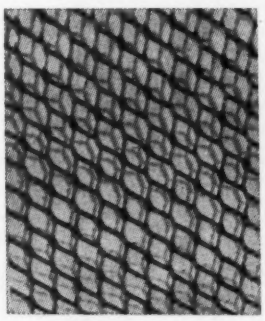
METAL LATH

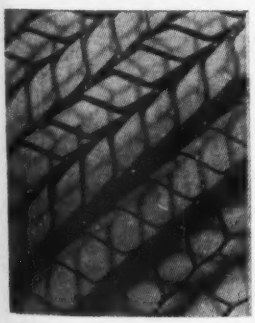
Diamond Mesh

Package: 10 27"x96" sheets (20 sq. yds.) or 9—24"x96" sheets 16 sq. yds.

Consumer Benefits:
- Better construction at a higher price.
- Strongest plaster construction.
- One-hour fire-rating.
- Assures full specification thickness of plaster.
- Increased crack resistance.

Sell these related items:
- 7 lb. 6 No. com. nails per 1000 sq. yds.

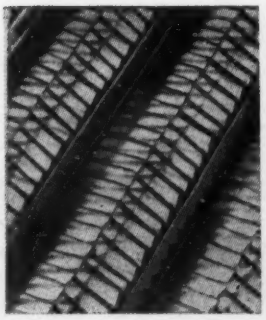




Rib Lath

Package: same as Diamond Mesh.

Consumer Benefits:
- Produces fewer plaster droppings, saving plaster.
- Slightly more expensive than diamond mesh but provides stiffer construction.
- Choice between two metal laths a matter of personal opinion.

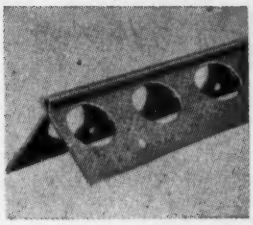


¾" Rib Lath

Package: same as Diamond Mesh.

Consumer Benefits:
- Permits greater spacing of supports.

METAL ACCESSORIES FOR PLASTERING



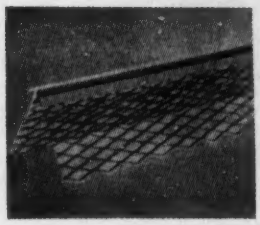
Rib Steel Corner Bead

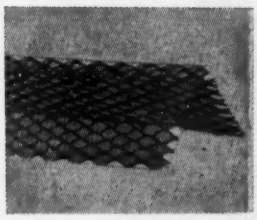
Standard and Expanded are used to protect the plaster on exposed corners. The two most common types are Expanded Metal Corner Bead and Flexible Corner Bead.

To estimate: the number of lineal feet of exposed corners is the number of lineal feet of corner bead needed.

Expanded Corner Bead Corner Lath

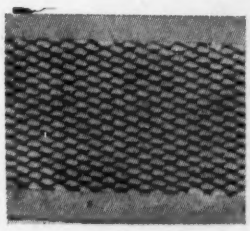
When wood lath, gypsum lath and insulating board lath are used as plaster bases, Corner Lath, a strip of diamond mesh lath 6" wide, bent to fit a corner angle, should be fitted to all the corner angles of a room and securely nailed to the wood-supports. This is a precaution against settling cracks.





Cornerite

To Estimate: For rapid estimating figure 85 feet of corner lath per room or develop into lineal feet by measuring all the angles in each room.



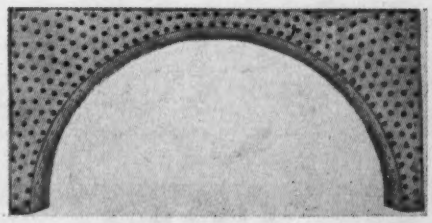
Strip Lath

At each corner of a door or window opening a piece of 3" metal lath is nailed diagonally to give additional reinforcing to prevent cracks.

To Estimate: Allow 4 feet for each door and window opening.

Strip-Ite Metal Plaster Arches

Factory prefabricated metal arches made in a variety of sizes and shapes to make a form over which to plaster arches that are not trimmed with wood.



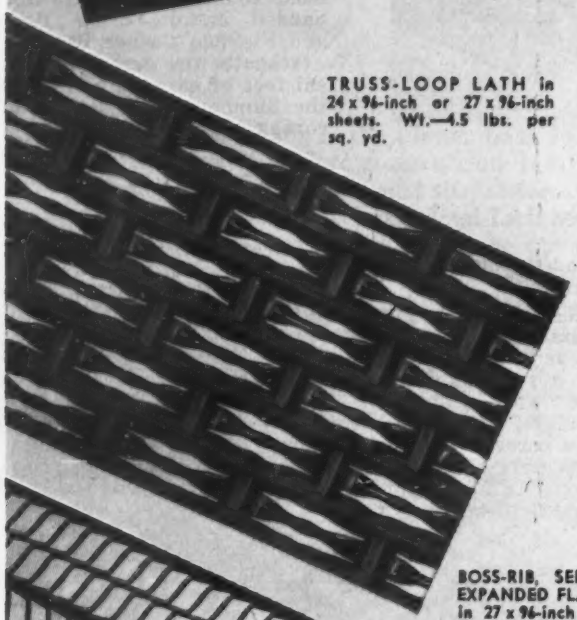
To estimate: One per opening per arch, size and design as specified.

Bostwick

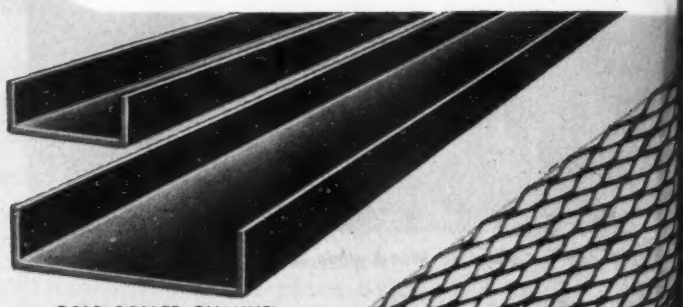
COMPLETE LINE OF METAL LATH

DELIVERY

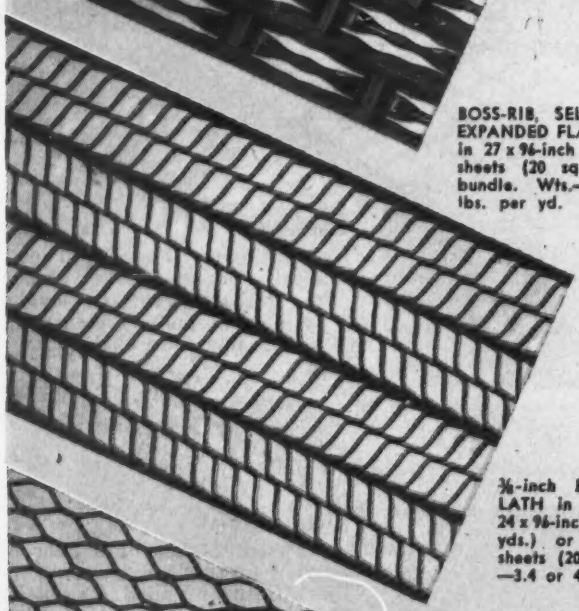
● Since 1890, Bostwick has cooperated closely with building supply dealers to produce higher quality building materials. Metal lath and metal lath accessories are Bostwick specialties, which are distributed from coast to coast. Every order gets immediate executive attention to assure the most rapid delivery possible.



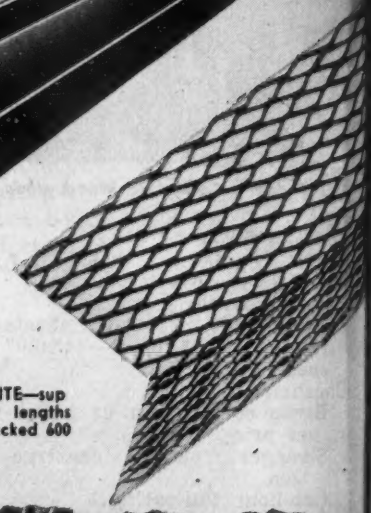
TRUSS-LOOP LATH in 24 x 96-inch or 27 x 96-inch sheets. Wt.—4.5 lbs. per sq. yd.



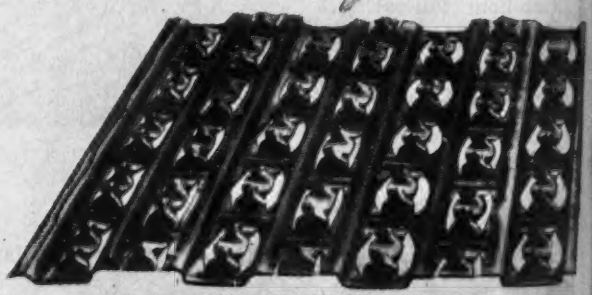
COLD ROLLED CHANNEL —¾ and 1½ inches wide, furnished in standard 16 and 20-foot lengths. Flanges are approximately ½-inch.



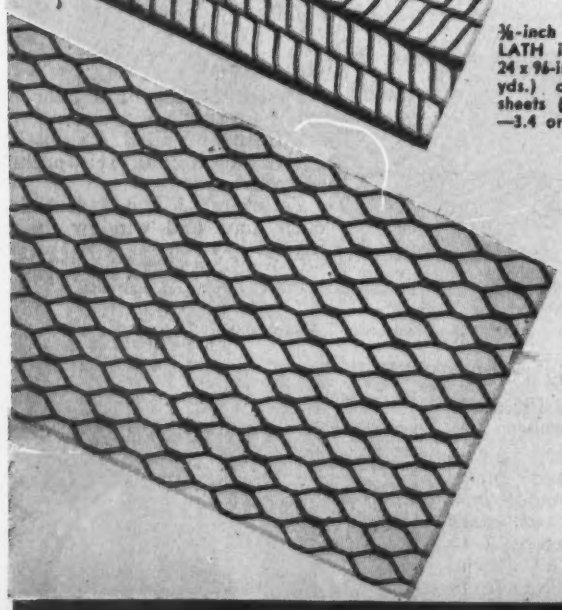
BOSS-RIB, SELF-FURRING, EXPANDED FLAT RIB LATH in 27 x 96-inch sheets. Ten sheets (20 sq. yds.) per bundle. Wts.—2.75 or 3.4 lbs. per yd.



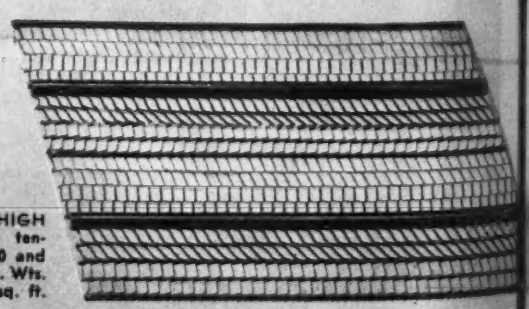
SMOOTH EDGE CORNERITE—supplied in standard 8-foot lengths with 2 or 3-inch wings. Packed 600 ft. per bundle.



CHANNEL FORM FLOOR LATH in 24 x 96-inch sheets. Nine sheets (16 sq. yds.) per bundle. Wts.—4.5, 6.0 or 6.75 lbs. per yd.



⅜-inch EXPANDED RIB LATH in bundles of nine 24 x 96-inch sheets (16 sq. yds.) or ten 27 x 96-inch sheets (20 sq. yds.). Wts. —3.4 or 4.0 lbs. per yd.



DIAMOND EXPANDED LATH in 27 x 96-inch sheets. Ten sheets (20 sq. yds.) per bundle. Wts.—2.5 or 3.4 lbs. per yd. Also 3.4 galvanized.

¾-inch EXPANDED HIGH RIB is available in ten-sheet bundles in 8, 10 and 12-foot x 29-inch sheets. Wts. —.60 or .75 lbs. per sq. ft.

BUILDING PRODUCTS BY Bostwick

METAL LATH and ACCESSORIES

Bostwick

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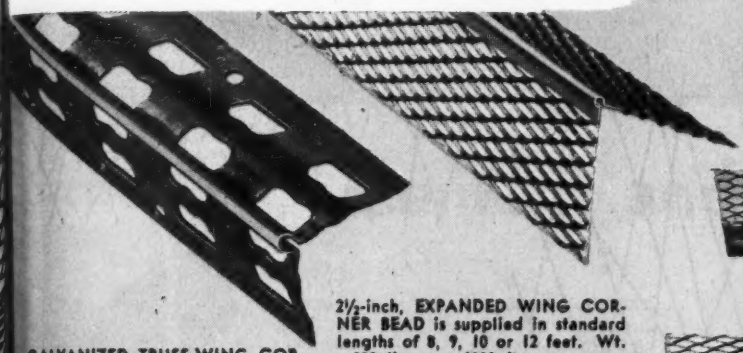
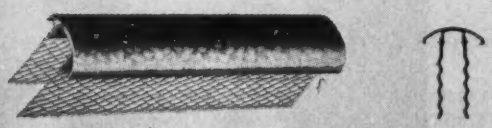
• Bostwick metal building materials are preferred by workmen everywhere. Each product is designed for ease-of-handling with superior features of construction that builders appreciate. Sell Bostwick and be sure you have the best. There's a concise and attractive new Bostwick Catalog prepared for your convenience. Write for it today.



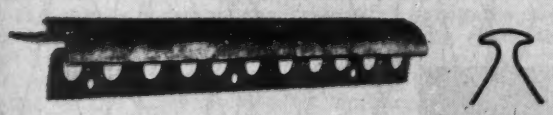
GALVANIZED TRUSS-WING CORNER BEAD, ideal for arches and other wall openings, is available in 8, 9, 10 and 12-foot lengths. Wt.—200 lbs. per 1000 ft.

2½-inch, EXPANDED WING CORNER BEAD is supplied in standard lengths of 8, 9, 10 or 12 feet. Wt. —230 lbs. per 1000 ft.

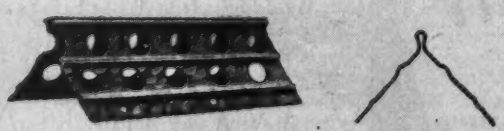


No. 400 BULL NOSE PARTITION CAP protects exposed ends of plaster. Sixteen-gauge face, lengths to order.

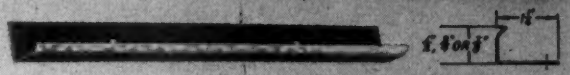
NARROW WING, SCALLOPED EDGE CORNER BEAD in standard lengths of 8, 9, 10 or 12 feet. Wt.—220 lbs. per 1000 ft.



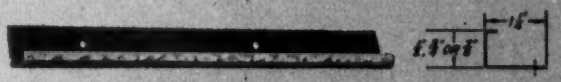
NARROW WING, BULL NOSE CORNER BEAD furnished with expanded wings in ¾ or 1½-inch radii or with solid wings in ¾-inch only. Lengths 7, 8, 9, 10 or 12 ft.



WIDE FLANGE CORNER BEAD supplied in 8, 9, 10 or 12-ft. lengths. Wt.—330 lbs. per 1000 ft.

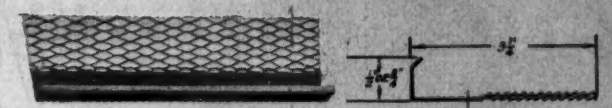


No. 10 NARROW FLANGE, MODIFIED SQUARE CASING, ½, ¾ or ⅞-inch ground, supplied in 7 and 10-ft. lengths.

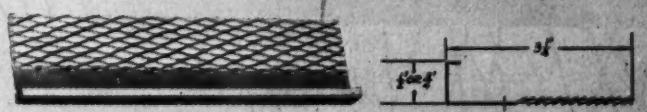


No. 12 NARROW FLANGE, SQUARE NOSE CASING, ½, ¾ or ⅞-inch ground, supplied in 7 and 10-ft. lengths.

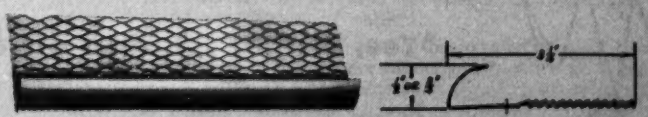
No. 16 NARROW FLANGE, BULL NOSE CASING with ¾-inch radius, supplied with ½, ¾ or ⅞-inch ground in 7 and 10-ft. lengths.



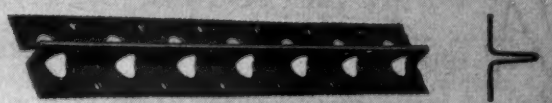
No. 20 EXPANDED FLANGE, MODIFIED SQUARE CASING, ½ or ¾-inch ground, supplied in 7 or 10-ft. lengths.



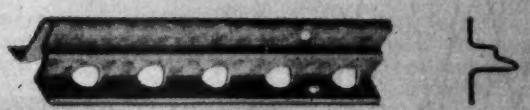
No. 24 EXPANDED FLANGE, SQUARE NOSE CASING, ½ or ¾-inch ground, supplied in 7 and 10-ft. lengths.



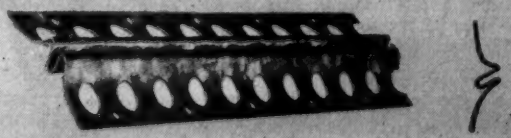
No. 32 EXPANDED FLANGE, BULL NOSE CASING with ¾-inch radius, supplied with ½ or ¾-inch ground in 7 and 10-ft. lengths.



FLUSH TYPE BASE SCREED made of 26-gauge galvanized steel in 10-ft. lengths. Packed 100 pieces to the crate. Wt.—160 lbs. per 1000 ft.



CURVED POINT BASE SCREED made of 26-gauge galvanized steel. Packed in 10-ft. lengths, 50 pieces to the carton. Wt.—195 lbs. per 1000 ft.



CONCEALED PICTURE MOULDING made of 26-gauge galvanized steel and supplied in 10-ft. lengths, packed 50 pieces (500 ft.) per carton. Wt.—225 lbs. per 1000 ft.

100 HEATON AVE.

THE BOSTWICK STEEL LATH COMPANY

NILES, OHIO

"Say, we're running low on

Trinity White Cement

—seems like there's been a

steady stream of it going out."

"Yes, I'll get another order in

—we did a good day's work for

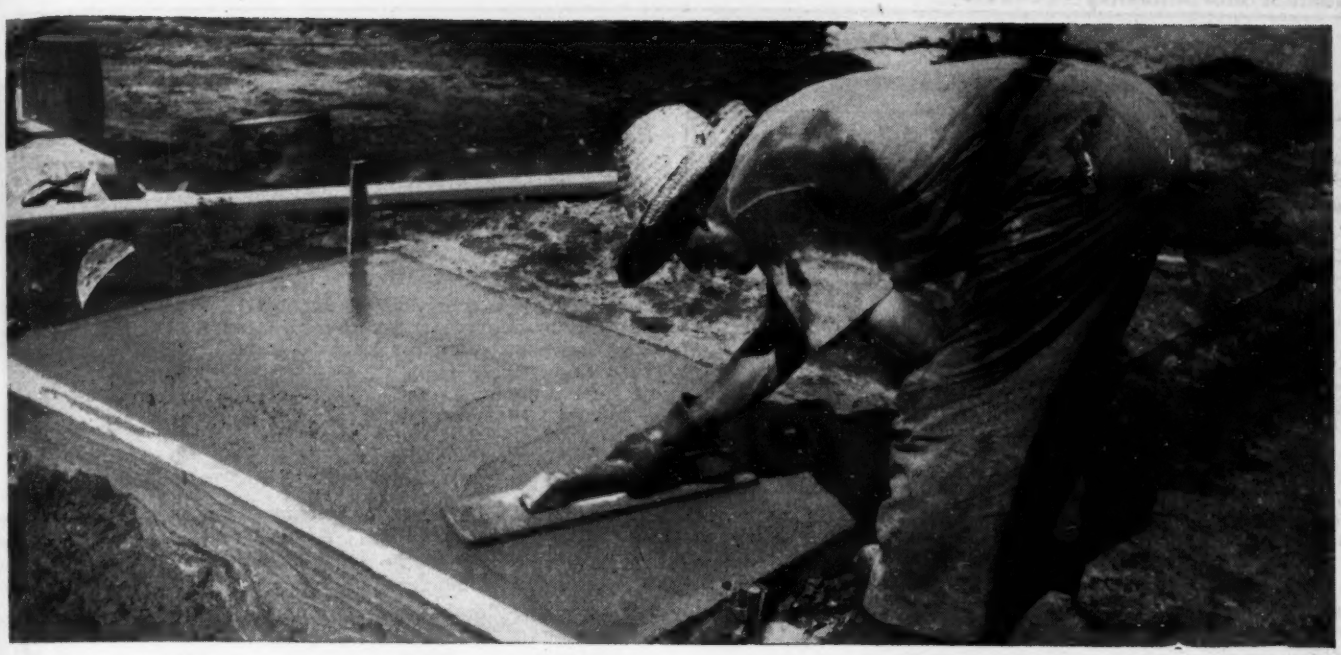
ourselves when we stocked

TRINITY WHITE."

The *whitest* white cement

It's a true portland cement

A product of GENERAL PORTLAND CEMENT CO., Chicago, Dallas, Chattanooga, Tampa, Los Angeles



Section 19 Cement and Masonry Products

CONCRETE

Concrete is a simple mixture of Portland cement, water, and various grades of aggregate such as sand, gravel, stone, etc. Water and cement interact chemically when mixed and harden around the aggregates to form concrete.

Portland Cement is a finely ground powder which is packaged in sacks containing 1 cubic foot of material which weigh 94 pounds. There are three types of Portland cement:

1. Grey Portland cement which is used for standard construction.
2. White cement, which has all the properties of grey Portland cement, except that it dries white.
3. High Early Strength Portland cement which has had a chemical added to hasten the hardening, and allows the concrete to reach its ultimate strength in a day rather than the 28 days required by standard cement.

Aggregates—Aggregates are are classified as "fine" or "coarse" depending on their size. Sand, which will pass through a ¼ in. wire mesh, is called a "fine" aggregate. "Coarse" aggregate, which ranges in size from ¼ in. to 3 in., may be pebbles, crushed stone or slag, or cinders. Both "fine" and "coarse" aggregates are used in concrete so that the spaces between the "coarse" aggregates are filled by smaller ones preventing voids in the concrete. For that reason, the end result of any plastic mortar, concrete, or plastic mix is not the same in volume as the volume of the elements used in making the mixture.

The proportion of fine and coarse aggregates depends on the nature of the job to be done. For example, FHA requires a 1:3:5 mixture for plain concrete (1 part cement, 3 parts sand, 5 parts pebbles, crushed stone or slag) while a 1:2:4 is required for reinforced concrete.

The amount of water used in concrete work is extremely important because it determines the strength of the binder holding the aggregates together. Too much water tends to allow the fine aggregates to separate from the coarse aggregates, thereby weakening the concrete.

FHA requirements are that poured concrete mixture shall be not less than:

a). For plain concrete—1 part Portland cement, 3 parts sand, 5 parts gravel, crushed stone or slag.

b). For reinforced concrete—1 part Portland cement, 2 parts sand, 4 parts gravel, crushed stone or slag.

c). Water content shall not be more than 7 gallons of water per bag of cement.

d). All materials shall be clean and free from loam and other foreign matter.

Mobile machine mixed concrete—In recent years, an increasingly acceptable method of obtaining concrete has been developed by equipping trucks with rotating motor driven cylindrical mixers. These are loaded through appropriate hoppers from several elevated storage bins with any kind of aggregate or cement.

Of the several types of machines used for this purpose, there are two which require description. One is where the water is added to the dry mix at the point of origin (actually the mixed concrete is loaded into a rotating drum when it leaves the factory). The other type is where the dry mix is loaded and mixed by rotation on its way to the job with water being added during transit.

Ready mixed mortar—In larger cities where jobs of considerable size are built, similar practices have been developed to supply ready mixed cement mortar for masonry walls, top-coating of concrete floors, and plastering of masonry walls. This method has the same desirable feature of saving time, space, and labor on the job; and, as a consequence, can not but help to accelerate the project.

Concrete aggregates—Because the qualities of concrete or mortar depends, not only on the kind and amount of cement in any mix, but equally so on the kind of aggregates, this item has, in recent years, received careful attention.

In order to control both the quantities and the purity of the mix, the processors developed

Crushed Stone—screened and graduated to size
Gravel—Washed—screened and graduated to size
Sand—washed—screened and graduated to size

All foreign matter, such as loam and clay, has been separated; and the present day available aggregates are a distinct improvement over the bank-run type of aggregate.

Two other aggregates, cinders and slag, are becoming increasingly acceptable in certain phases of the use of concrete.

Cinders, of controlled maximum size (with an admixture of smaller particles) graded to specification, are being widely used as an aggregate for concrete block, medium weight bearing floors, etc. A light weight concrete having good structural value results from the use of cinders —usually used without sand.

How to Estimate Materials Required for 100 Sq.Ft. of Concrete of Various Thicknesses

Thickness of concrete, in.	Amount of concrete, cu.yd.	Proportions								
		1:1¼:2 mix			1:2¼:3 mix			1:2¾:4 mix		
		Cement, sacks	Aggregate		Cement, sacks	Aggregate		Cement, sacks	Aggregate	
			Fine, cu.ft.	Coarse, cu.ft.		Fine, cu.ft.	Coarse, cu.ft.		Fine, cu.ft.	Coarse, cu.ft.
3	0.92	7.5	12.9	14.7	5.8	12.9	17.5	4.6	12.9	18.4
4	1.24	10.0	17.3	19.9	7.8	17.3	23.6	6.2	17.3	24.8
5	1.56	12.5	21.9	25.0	9.8	21.7	29.6	7.8	21.8	31.2
6	1.85	15.0	25.8	29.4	11.5	26.0	35.2	9.3	26.0	37.0
8	2.46	20.0	34.6	39.8	15.4	34.4	46.8	12.3	34.4	49.3
10	3.08	25.0	43.8	50.0	19.3	43.2	58.5	15.4	43.2	61.6
12	3.70	30.0	51.6	58.8	23.1	51.8	70.4	18.5	51.8	74.0

Quantities may vary 10 per cent either way, depending upon character of aggregate used. No allowance made in table for waste.

Expanded slag. Slag, a by-product of the steel industry is, after grading for size, an excellent light weight, yet strong aggregate. Slag aggregate may be mixed with sharp sand in order to fill the voids, if there is a deficiency in fines.

Light Weight Aggregates. In addition to the previously mentioned aggregates for structural concrete, a new lightweight group of manufactured aggregates have been perfected.

Among the most common of these are Haydite, Waylite, Celocrete, Vermiculite, and pumice.

Fireproof, rot proof, termite proof; plus the functional characteristics of being excellent non-conductors, inert, with no reaction to other substances, they are ideal for many applications.

Vermiculite. Vermiculite, one of the widely accepted light aggregates, is an "exploded" alteration product of mica. As a concrete aggregate it weighs between 5 and 6 pounds per cubic foot.

With the admixture of liquid waterproofing (approximately 1 quart to each 3 cubic feet of aggregate) a very desirable mixture results. This can be used for roof decks, light weight load floors, precast slabs for roofing, accoustical tile and many other practical applications.

HOW TO MAKE QUALITY CONCRETE

Water: Mixing water should be clean enough to drink.

Sand and Gravel: Sand should be clean, hard and well graded. Gravel should be clean, hard and range in size from ¼ inch up to 1½ inches. Crushed stone is sometimes used as gravel and should be similarly graded. Bank-run gravel is often suitable for concrete if tested to make sure that it is clean enough.

Portland Cement: Portland Cement should be kept in a dry place. Any cement containing lumps so hard that they do not readily pulverize when struck lightly with a shovel should not be used.

Mixing and Placing Concrete: Good concrete is made by carefully measuring all materials—water, cement, sand and gravel. For machine mixing allow 1 to 2 minutes' mixing after all materials are in the mixer. Freshly mixed concrete should be placed in forms immediately, then thoroughly tamped and spaded to assure smooth surfaces and dense concrete.

Curing Concrete: Concrete needs moisture to harden properly. New concrete should therefore be protected from drying out for 7 days. Floors and other horizontal surfaces should be kept covered with moist earth, straw, canvas, etc., and kept wet the required time. Walls should be protected with coverings kept wet.

The commonly accepted terms of measurement for these items are:

Sand or gravel or crushed stone—by the cubic yard or ton ("by the ton" is becoming more generally accepted as it lends itself to greater accuracy and simplifies loading and measuring of less than ton quantities).

Concrete by the cubic yard, cubic foot or square foot—commonly when sold in bulk the cubic yard is used and manufacturers of concrete use it as a unit price.

Cubic foot—this measurement is useful in estimating volumes from plans such as walls, footings, porch foundations, walks, floors, trench walls, etc. Usually, the amounts of cubic feet are transposed into cubic yards by dividing the total by twenty-seven, which is the number of cubic feet in one cubic yard, and priced by the cubic yard.

Square feet—this method of estimating concrete is used for side wall plaster, concrete floors, or top coat and also walks.

CONCRETE MIXTURES

How to Estimate Concrete:

To Make a Cubic Yard of Concrete

Proportion	Bbls. Concrete	Cu. Yds. Sand	Cu. Yds. Gravel
1:2:4	1.46	.41	.81
1:3:5	1.13	.47	.78
1:3:6	1.00	.46	.90

In localities where pit run gravel is used, a 1:3:5 mixture is approximately the same as a 1:5 mix, and a 1:3:6 mixture compares to a 1:6 mix. To make a cubic yard of concrete from pit run gravel requires 5⅔ sacks of cement and 1.08 yards of gravel for a 1:5 mix, while a 1:6 mix requires 5¼ sacks of cement and 1.12 yards of gravel.

To compute the quantities of cement, sand, gravel or stone required to construct walls and footings:

Lineal feet of wall x its thickness in feet x its height in feet = cubic feet.

Lineal feet of footings x its breadth in feet x its depth in feet = cubic feet.

Divide the total by 27 which reduces cubic feet to cubic yards. Multiply by the factor in the above table for the mixture required for one cubic yard of concrete.

To compute the quantities of cement, sand, gravel or stone required to lay floors and walks:

Compute the area in square feet.

100 sq. ft. of 4 inch concrete laid one course or "monolithic" requires for a 1:3:5 mix, 6 sacks cements, .66 yards of sand and 1 yard of coarse aggregate. For the same area, a 1:5 pit run gravel mix requires 6 sacks cement and 1½ yards of gravel.

How to Select Proper Mix

Recommended proportions of water to cement and suggested trial mixes

KINDS OF WORK	Add U. S. gal. of water to each sack batch if sand is			Suggested mixture for trial batch			Materials per cu.yd. of concrete*		
	Very wet	Wet (average sand)	Damp	Cement, sacks	Aggregates		Cement, sacks	Aggregates	
					Fine, cu.ft.	Coarse cu.ft.		Fine, cu.ft.	Coarse cu.ft.
5-Gal. Paste for Concrete Subjected to Severe Wear, Weather or Weak Acid and Alkali Solutions									
One-course industrial, creamery and dairy plant floors, etc.	3¾	4	4½	1	Maximum size aggregate ¾ in. 1¾	2	8	14	16
6-Gal. Paste for Concrete to be Watertight or Subjected to Moderate Wear and Weather									
Watertight floors, such as industrial plant, basement, dairy barn; watertight foundations; driveways, walks, tennis courts, swimming and wading pools, septic tanks, storage tanks, structural beams, columns, slabs, residence floors, etc.	4¼	5	5½	1	Maximum size aggregate 1½ in. 2¼	3	6¼	14	19
7-Gal. Paste for Concrete not Subjected to Wear, Weather or Water									
Foundation walls, footings, mass concrete, etc.	4¾	5½	6¼	1	Maximum size aggregate 1½ in. 2¾	4	5	14	20

*Quantities are estimated on wet aggregates using suggested trial mixes and medium consistencies—quantities will vary according to the grading of aggregate and the workability desired.

It may be necessary to use a richer paste than is shown in the table because the concrete may be subjected to more severe conditions than are usual for a structure of the type being constructed. For example, a swimming pool ordinarily is made with a 6-gal. paste. However, the pool may be built in a place where soil water is strongly alkaline, in which case a 5-gal. paste is required.

RELATED CONCRETE ITEMS

Chloride—100 lb. sack.

Calcium chloride—The addition of calcium chloride in the recommended proportions to concrete mixes is becoming more prevalent in those areas where low temperatures occur. This chemical lowers the freezing point of the water in the mix and, by its controlled use, concrete can be placed in sub-freezing temperatures without freezing.

BUILDING A CONCRETE SIDEWALK

IN BUILDING a sidewalk or slab, the first step to insure a good base. If soil is not well drained, a 6 inch sub-base of clean, coarse gravel or cinders is necessary. Next, the correct mixture of cement, sand, aggregate, and water must be mixed.

FORMS ARE BUILT along sides, usually 2x4s held in place by stakes. To provide for expansion and contraction, walks should be divided at 4 to 6 foot intervals. Every other section is concreted and allowed to harden. Alternates are then filled-in.

CONCRETE IS POURED in form to top edge and leveled with a strike board, passed across the form in a sawlike motion. It is then further smoothed with a wood float. This provides a uniform, gritty, non-skid surface which requires no further finishing.

AN EDGING TOOL is used along the side forms and division lines to give the walk a finished appearance. The surface should be protected for about 5 days with a covering of moist burlap, sand, or earth.

It has properties which make it adaptable to many other uses, a few of which are laying dust on driveways or tennis courts; keeping damp cellars dry; melting snow and ice on walks, etc.

To Estimate: Quantities of calcium chloride per bag or Portland cement:

For temperatures above 90°F., 1 lb.
For temperatures 80 to 90° F., 1½ lbs.
For temperatures 32 to 80° F., 2 lbs.
For temperatures below 32°F., 2 to 4 lbs., depending upon prevailing temperature conditions and amount of protection furnished.

Cement Colors—9 lb. package

Red	Green
Yellow	Blue

To Estimate: The following quantities of cement color required to lay 100 sq. ft. of floor topping one inch thick:

Gray Portland cement.....3 sacks (¾ bbl.)
3 cu. ft. of sand.....300 lbs.
5¼ cu. ft. coarse aggregate.....525 lbs.
Maximum size ⅜ inch
Concentrated cement color..... 27 lbs.
Not more than 5 gals. of water, including moisture in aggregates.
For ¾ inch topping deduct 25 per cent from the above quantities; for ½ inch topping deduct 50 per cent from the above quantities.

Expansion joints—Concrete is subject to expansion and contraction imposed by temperature. Research has proven that the "cracks" which result can be largely prevented; and likewise the stresses to supporting or surrounding members, which expansion causes, by the provision of expansion joints which are placed at stated intervals (casual inspections of pavements, highways, bridges will serve to illustrate this practice).

CEMENT PAINTS

These products come in white and colors and are water resistant and give excellent service on exterior and interior vertical wall surfaces.

Selling Points and Consumer Benefits:
Water-proofs masonry walls.
Protects against elements and adds to life of masonry.
Penetrates the millions of minute pores of the masonry surface and becomes an integral part of wall.
Permanent—Does not scale, chip, blister or peel.
Beautifies ugly masonry walls.
Easy to apply.

Sell the Related Items:
Stiff Bristle brush.

Mortar Color—100 lb. Sacks
Red
Buff
Chocolate
Black

To Estimate: Amount of mortar color for 1,000 brick laid with ½ inch running or common-bond joints.

Black, Double Strength.....100 lbs.
Buff .....100 lbs.
Chocolate, Double Strength.....100 lbs.
Green .....100 lbs.
Red .....125 lbs.

Concrete Reinforcement. Reinforcement is the term used to describe the steel bars or welded mesh placed in concrete to increase its tensile strength. Concrete is a material which is very strong in compression for supporting loads placed directly upon it, but it requires steel reinforcing in some structures to increase its power to resist forces that tend to bend or pull it apart.

MOISTURE PROOFING MASONRY FOUNDATION WALLS

There are several methods of waterproofing masonry foundation walls: water-, damp-, or moisture-proof. Most common is the plastering or parging of the outside or exterior walls with one or preferably two coats of cement mortar.

The character of the ground or soil will determine the kind of dampproofing required. In excessively wet ground, the membrane system is recommended. This method consists of applications of hot mastic (tar and pitch) to several layers of felt (tar paper), and also fabric or cloth soaked with a patented mixture of tar and other ingredients and applied to the walls with a hot liquid. In fairly dry ground waterproofing might be eliminated. but, in any case, clay drain tile should be used around the outside of the wall footing, as there will always be the rainy season to create surface water.

There are also many patented waterproofing materials, either liquid paste or powder in form which can be painted or sprayed on the walls. For concrete work the integral system of waterproofing is recommended. These compounds are in the form of liquid, paste or powder and are generally mixed in with the concrete materials while they are being mixed in a mixer. The manufacturer's instructions should always be followed for a successful job.

However, in some localities, when hydrostatic pressure prevails, it becomes necessary to supplement this treatment with two additional water seepage preventives. They are:

1. Mastic, cold emulsion, or hot asphalt mopped on.
2. Installation of clay drain tile at base of footing course (see Clay Products Section).

The most simple measuring unit is the square foot; and, when the perimeter and the height are known, the total square feet are easily obtained.

How to convert square feet into bags of cement and cubic yards or tons of sand: The coat of plaster will average ½ inch thick. It requires 4.17 cubic feet per 100 square feet of surface ½ inch thick.

By use of the same 1-3-(10 percent lime) mix as before described (with the addition of any appropriate waterproofing compound), we arrive at this simple formula.

1 bag of portland cement
3 cu. ft. of sand
10 lbs. of hydrated lime
(waterproofing to fit directions)

This mix will result in 3 cubic feet of plaster mortar and it will cover at:

¼" thick—144 sq. ft. .....second coats
½" thick— 72 sq. ft. .....regular coats
¾" thick— 48 sq. ft. .....brick work
1" thick— 36 sq. ft. .....rubble stone

MASONRY CEMENT MORTARS

Any masonry wall or chimney depends for its strength and durability on the mortar which connects and holds together the masonry elements of the structure.

Proper Mortar Mixes for Masonry

Masonry walls laid below grade or in above-grade construction where extra strength is required, should be laid with a cement mortar made of 1 volume of Portland cement to 3 volumes of sharp sand to which may be added not more than 10 pounds of hydrated lime per sack of cement.

For laying above-grade walls under average conditions of exposure, use a mortar made in proportions of 1 volume of Portland cement to 1 volume hydrated lime to 6 volumes of sharp sand.

Sufficient water is added to the above mixes to produce, after thorough mixing, a mortar of good working consistency.

Quantities required to produce 100 cu. ft of mortar:
1:3 29.2 cu. ft. of cement—97 cu. ft. sand.
A one sack batch produces 3.43 cu. ft. of mortar.
1:1:6 14.9 cu. ft. of cement—14.9 cu. ft. of lime—99 cu. ft. sand.
A one sack batch (1 sack cement and 1 sack lime plus 6 cu. ft. sand) produces 6.70 cu. ft. mortar.

Masonry Cement. In the last few years partly premixed masonry cement mortars have come into general use. They consist of a mixture of Portland cement and a plasticising agent, such as lime, ground clay or ground limestone. Sand and water are mixed with the cement mortar on the job to produce mortar. The proportions are 1 part masonry cement to 3 parts sand by volume. Usually 20 shovels of sand are mixed with 1 sack of masonry cement.

To estimate: 9 sacks of masonry cement and 27 cu. ft. of sharp sand will produce 1 cu. yd. of mortar. A one sack batch produces 3 cu. ft. of mortar.

Mortar requirements per 100 cement blocks:
8x 8x16½ inch joint 4 cu. ft. mortar.
8x12x16½ inch joint 5 cu. ft. mortar.

For quick figuring:
1 bag masonry cement will lay 75 cement blocks.
1 bag masonry cement will lay 200 bricks.

Concrete masonry units, that is, concrete block, concrete building tile and concrete brick, are widely used in constructing all types of farm buildings. The growing popularity of concrete masonry construction for farm structures is due to its economy, durability and

GOOD REASONS WHY EVERYBODY WANTS STA-DRI FOR MASONRY

STA-DRI MINERAL COATINGS

1. Will hold a wall of water nine feet high without leakage, even if applied inside a basement. Economical. Easy to apply.
2. Stays white when wet—no spotting or grayout.
3. Contains a mold and mildew inhibitor.
4. Long-life job assured by the absence of organic deterioration, disintegration, rubbing off, flaking. Stone-like in resisting erosion.
5. Supplied in white and a variety of colors at no extra cost. (5, 25, 50 lb. packages)

STA-DRI CLEAR-COAT

1. Contains SILICONE. Cannot be wet by water.
2. Controls efflorescence.
3. Transparent—does not change natural color or texture of masonry. Clean. Easy to apply.
4. Accelerated tests show no appreciable change in applied Clear-Coat after the equivalent of ten years' weathering.
5. Only one brush or spray application is necessary to keep wet weather out of masonry.
6. Supplied in 1, 5, 30 and 55 gal. containers.

STA-DRI STOPS WATER and BEAUTIFIES

AMERICAN STA-DRI CO.
BRENTWOOD, MARYLAND

BETTER MASONRY

Because of this water-proofing, and because of its plasticity, its high water-retaining capacity and its excellent bonding qualities, Brixment mortar furnishes as great protection against leaky walls as can be secured from any kind or type of mortar materials.

BRIXMENT HELPS PREVENT EFFLORESCENCE

Efflorescence is caused by soluble salts which are present in almost all masonry materials. When reached by water, these salts dissolve and may be drawn, by evaporation, to the surface of the wall.

Brixment helps prevent efflorescence. The air-entraining and water-proofing agent in Brixment prevents water from saturating the mortar and dissolving the small amount of salts that it may contain. Moreover, Brixment mortar prevents water from percolating down through the wall, dissolving salts which may be in the brick, and carrying them to the surface.

BRIXMENT IS PLASTIC . .

One of the most important characteristics any mortar can possess is *plasticity*. Within certain limits, plasticity is the greatest single factor not only in the *economy* of the brickwork, but also in its strength, its neatness, and its resistance to the passage of water.

One of the outstanding characteristics of Brixment mortar is its unusual plasticity. For over thirty years, bricklayers all over the United States have agreed that the workability of Brixment is comparable to that of straight lime putty. This exceptional plasticity makes it easy for the bricklayer to secure neat, economical brickwork, with the brick properly bedded, and the joints well filled.

And because of this unusual plasticity, a bag of Brixment will carry three full cubic feet of sand and still make an ideally workable mortar.

WATER-RETAINING CAPACITY . . . . . .

Brixment mortar has extremely high water-retaining capacity. It strongly resists the sucking action of the brick. Brixment mortar therefore stays smooth and plastic longer, when spread out on the wall. *This permits a more thorough bedding of the brick, and a more complete contact between the brick and mortar.* The result is a better bond, and hence a stronger and more *watertight wall.*

BRIXMENT FOR STUCCO AND PLASTER . . . . . .

The same characteristics that make Brixment superior to portland cement and lime for masonry make it equally superior to these materials for stucco and plaster.

Brixment is more economical, more moisture-resistant, more plastic and more uniform in color than a combination of cement and lime. It has a slower, more convenient hardening time and since it is used in leaner mixes, hair-checking, crazing and shrinkage are reduced to a minimum. Write for recommended mixes.

Brixment stucco and plaster can be applied over any kind of masonry backing (brick, tile, block, concrete, etc.), or over expanded metal lath. The use of Brixment stucco and plaster over any other backing is not recommended.

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LOUISVILLE CEMENT COMPANY, Incorporated

General Offices:

Second & Walnut Sts., Louisville, Kentucky

New York 17, N. Y.
101 Park Ave.

Chicago 1, Ill.
228 No. LaSalle St.

Detroit 7, Mich.
1573 East Larned St.

Mills:

Brixment, New York

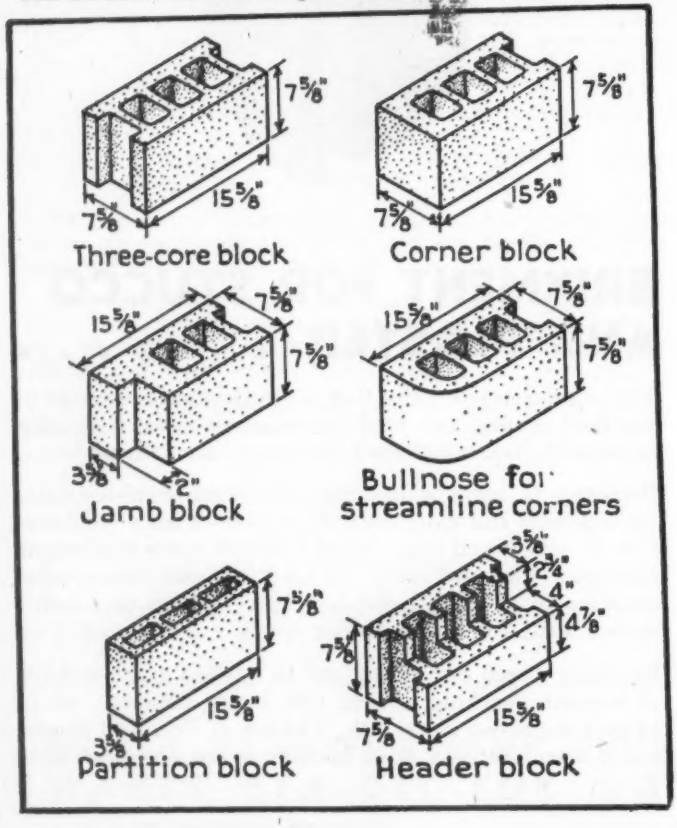
Speed, Indiana

Table showing number of cement blocks required in building from 16x16 up to 50x50 wall, 10 blocks high. Block sizes 8x8x16. If a wall 11 blocks high is required add 10 per cent to number shown.

	LENGTH OF BUILDING																	
	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50
16	480	510	540	570	600	630	660	690	720	750	780	810	840	870	900	930	960	990
18	510	540	570	600	630	660	690	720	750	780	810	840	870	900	930	960	990	1020
20	540	570	600	630	660	690	720	750	780	810	840	870	900	930	960	990	1020	1050
22	570	600	630	660	690	720	750	780	810	840	870	900	930	960	990	1020	1050	1080
24	600	630	660	690	720	750	780	810	840	870	900	930	960	990	1020	1050	1080	1110
26	630	660	690	720	750	780	810	840	870	900	930	960	990	1020	1050	1080	1110	1140
28	660	690	720	750	780	810	840	870	900	930	960	990	1020	1050	1080	1110	1140	1170
30	690	720	750	780	810	840	870	900	930	960	990	1020	1050	1080	1110	1140	1170	1200
32	720	750	780	810	840	870	900	930	960	990	1020	1050	1080	1110	1140	1170	1200	1230
34	750	780	810	840	870	900	930	960	990	1020	1050	1080	1110	1140	1170	1200	1230	1260
36	780	810	840	870	900	930	960	990	1020	1050	1080	1110	1140	1170	1200	1230	1260	1290
38	810	840	870	900	930	960	990	1020	1050	1080	1110	1140	1170	1200	1230	1260	1290	1320
40	840	870	900	930	960	990	1020	1050	1080	1110	1140	1170	1200	1230	1260	1290	1320	1350
42	870	900	930	960	990	1020	1050	1080	1110	1140	1170	1200	1230	1260	1290	1320	1350	1380
44	900	930	960	990	1020	1050	1080	1110	1140	1170	1200	1230	1260	1290	1320	1350	1380	1410
46	930	960	990	1020	1050	1080	1110	1140	1170	1200	1230	1260	1290	1320	1350	1380	1410	1440
48	960	990	1020	1050	1080	1110	1140	1170	1200	1230	1260	1290	1320	1350	1380	1410	1440	1470
50	990	1020	1050	1080	1110	1140	1170	1200	1230	1260	1290	1320	1350	1380	1410	1440	1470	1500

Common Shapes and Sizes of Concrete Masonry Units

Units are also made in half lengths and widths of 5⅝", 9⅝" and 11⅝"



firesafety—these advantages mean low maintenance costs and long life. Masonry units are readily obtainable from local concrete products manufacturers.

Sizes and Shapes

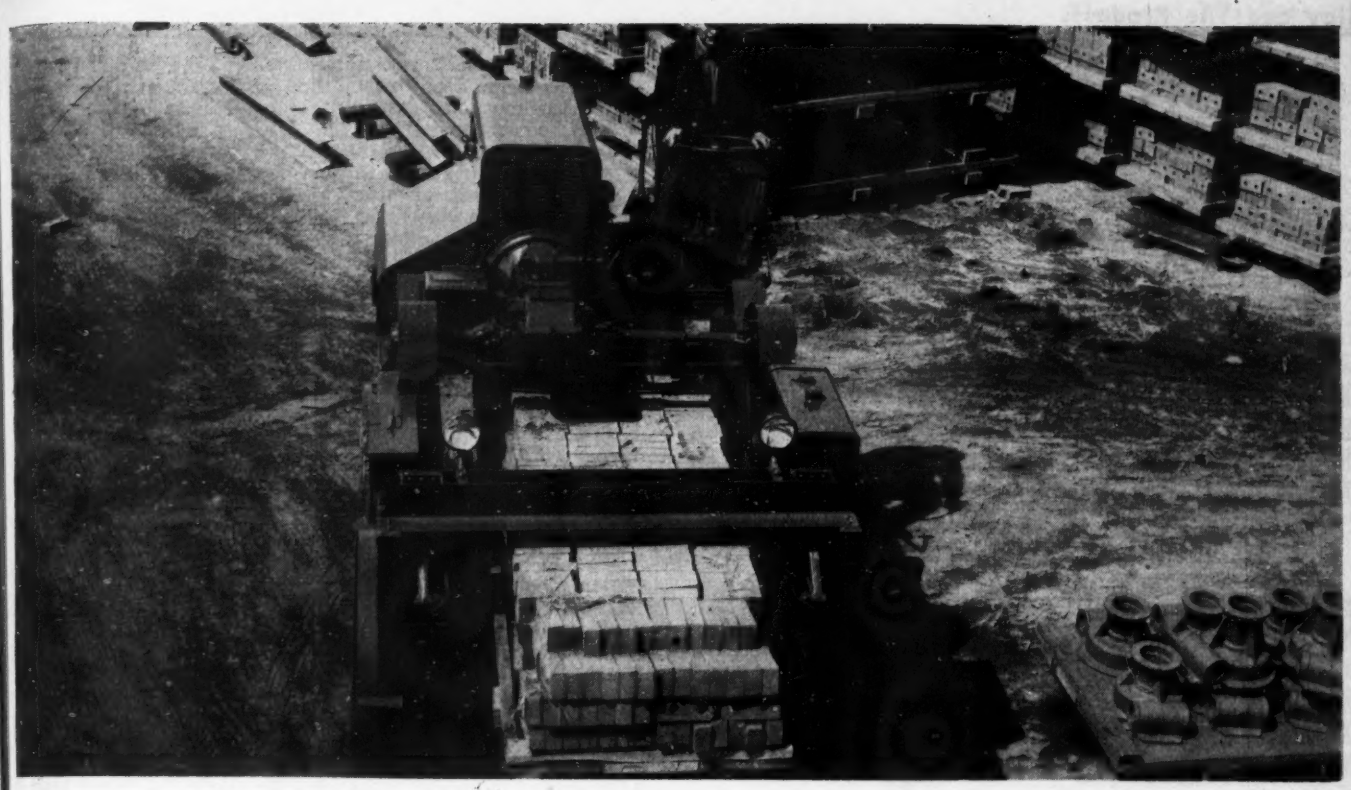
Concrete masonry units are made in several convenient shapes and sizes. The nominal 8x8x16-in. unit referred to as a concrete block is the size most widely used. It is laid in courses 8 in. high and makes a wall 8 in. thick. Concrete block are also available in 4, 6, 10 and 12-in. widths. Another common size is the nominal 5x8x12-in. unit called a building tile, which is laid in courses 5 in. high and builds walls 8 or 12 in. thick according to the way the unit is placed. It is also available in 4-in. width. In some parts of the country the 3⅓x8x12-in. unit is available. It is laid in courses 3⅓ in. high and either 8 or 12 in. thick. Regardless of what type of concrete masonry unit is available locally, the products manufacturer carries in stock corner returns, door and window jamb units, joist units, half-length units, and other specials which enable the mason to construct rapidly a neat, attractive wall. Common shapes and sizes of concrete masonry units are illustrated at right.

How to Build With Concrete Masonry

In general, it is best practice to employ an experienced mason to build concrete masonry walls, especially for the more important structures. In small, less important work any man handy with tools can soon acquire the necessary experience to lay concrete masonry units. Follow these simple rules:

1. Check the footing or foundation wall to see that it is level and straight, then stretch chalk lines along the outside edges of the walls to serve as guides in building the corners.
2. Build corners 2 or 3 courses high, then stretch chalk lines between corners along outside faces to serve as guides in laying the walls.
3. Place a double row of mortar on the footing or foundation wall as shown in accompanying illustration. This provides what is called "face shell bedding."
4. Press concrete masonry units carefully into the mortar with outer face touching the chalk or guide line.
5. Butter vertical edges of units with mortar and shove firmly against unit previously placed. Where large units are used it is customary to stand them on end and butter edges before placing in wall.
6. Vertical joints should average about ¼ to ⅜ in. thick. Horizontal or bed joints should be not more than ½ in. thick, and should average ⅜ in. thick. Excess mortar which is squeezed out between joints as the units are placed should be struck off flush with the wall surface with a trowel.
7. After the mortar has become quite stiff, it should be pointed with a small trowel or rounded pointing tool which compacts the mortar, pressing it firmly against the concrete masonry units. This helps produce tight, strong joints.
8. Keep concrete masonry units dry until laid in the wall.

Some very interesting wall finishes can be obtained by varying the treatment of the mortar joints. A simple yet attractive finish is produced by tooling the horizontal joints to make them stand out prominently and by cutting off the vertical joints flush with the wall surface, then rubbing them with a piece of carpet, cork or other rough material to give them about the same texture as the concrete masonry units. Then when the wall is painted with Portland cement paint an attractive finish with bold horizontal lines is obtained.



Section 20 Clay & Tile Products

BRICK

A brick is a solid building unit of burned clay or shale. Good brick are generally burned for several days at a temperature of approximately 2000 degrees Fahrenheit. Brick are made for many uses, but mainly for building construction. Other uses are for fire brickwork, paving, chimney work and lining acid retorts.

The brick used for building construction are generally of clay, shale or clay and shale. The common brick are generally of clay or shale, having a natural face, made either by the stiff mud or sloppy mud process. The face brick are more generally made by the stiff mud process with smooth or rough textured surfaces made by special face scoring devices.

Other surfaces of brick are ceramic and salt glazed. All brick are made also in special shapes for ornamental purposes, such as watertables, bull noses and jambs.

Composition brick are those that are made of concrete and sand-lime. Sand-lime brick are sometimes used for facing in light shafts, due to their light colors.

The present standard size of brick, 2¼" x 3¾" x 8", is such that the nominal wall thicknesses are conveniently given in multiples of 4 inches. Laid up so that the 2¼" x 8" face is exposed, the flat side, or 3¾" dimension, produces the thickness of the wall. Eight inches is composed of two bricks laid side by side or twice the 3¾" dimension plus the intervening ½-inch mortar joint to make a total of 8 inches in thickness. Three brick laid side by side make a 12-inch wall.

Brick masonry must be "bonded" together, that is, the individual brick units must be tied together at certain intervals by bricks laid in the opposite direction—such bricks being called "headers." There are many and varied types of bonding.

Two kinds of brick are used in general:—face brick and common brick. Face brick are made from better grades of clay which are burned longer to produce a dense hard surface to give longer life and a better surface appearance. Face brick may have a "smooth face" or be textured—"wire cut", "velvet", etc. They may be purchased in "straight shades"—every brick being of approximately the same color—or "mingled shades"—brick varying in shade in the same color line. Face brick are extensively used for brick veneering residences and for fronts of commercial and public buildings.

Common brick are softer than face brick and are generally used to "back up" face brick in 8 and 12-inch walls, or are used in masonry work that is not exposed to the weather. However, F.H.A. will allow common brick for use in veneering that has been "hard-burned"—that is, specially selected brick that were closest to the fire in burning. Common brick are graded and sold upon their hardness.

COMMON BRICK IN WALL CONSTRUCTION

There are three classes of common brick used; severe-weathering, medium-weathering, no-weathering. The severe-weathering are generally the hard well-burned brick that run more evenly to class. The medium-weathering may be a mixture of well- and medium-burned brick, that might also be called "run of the kiln" class. The no-weathering are the soft, salmon or underburned brick. These brick should never appear on the weather side of walls as they will disintegrate when subjected to severe weather.

The severe-weathering are selected for heavy bearing walls. The medium-weathering are generally used for light construction.

The clinker is an overburned brick which has lost its shape, due to being in direct contact with the fire in the kiln. These brick are often used as face brick.

AMERICAN OR COMMON BOND

The American or common bond is composed of a header and 5, 6, or 7, stretcher courses on the face of the wall. This is called a **setting up.** The number of stretchers is determined by the local building code.

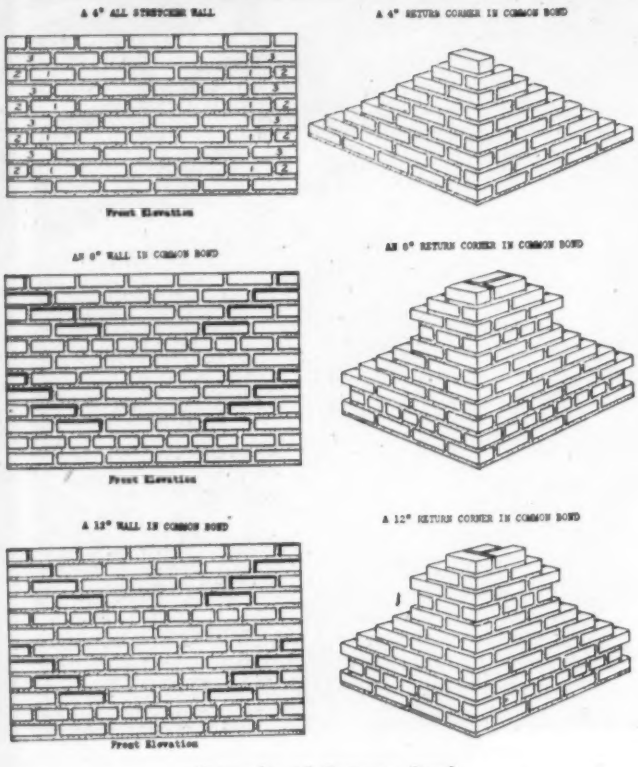
This bond is considered the strongest structural bond, because the brick overlap themselves by one half, lengthwise. The header served to bond the various tiers together, or across the wall, depending on the thickness of the walls. The walls are of various thicknesses and are built to carry loads that are imposed upon them.

Each 4" thickness of wall is called a **tier,** so that an 8" wall has 2 tiers, a 12" wall will have 3 tiers, and so on.

The bond is used almost entirely in building construction, where ornamental or pattern bonds are used for the facing of the walls.

ENGLISH BOND

The English bond is one of the true fundamental bonds used in brick construction. As the name indicates, it is used very extensively in England and her colonies. It is



Examples of Common Bond

also used in other parts of the world. In England it is used as a structural as well as an ornamental bond. In America it is used mainly as an ornamental bond.

It is exceptionally strong across the width of the wall, and weak lengthwise of the wall. Its weakness is also apparent on the face of the wall, because the brick overlap themselves by one-quarter length of the brick. The arrangement of the bond is that of alternate courses of headers and stretchers. In actual practice the full headers are only used every sixth, seventh, or eighth courses in height. The other courses have snap headers or bats (half brick) to carry out the bond effect. This also speeds up the construction of the wall. The corners are started with a three-quarter brick, or a whole brick on the stretcher courses. The strictly English method is to have a stretcher on the corner of the stretcher course and a closure on the header course.

FLEMISH BOND

This is one of a series of true fundamental bonds similar to the American, English and Dutch bonds. It is a simple bond to maintain, as it consists of alternate headers and stretchers on the same course. Like the English and Dutch bonds, it may be started with either a three-quarter or whole brick on the corner. This is also a one-quarter lap bond and should be considered weak lengthwise on the face of the wall.

The true Flemish bond has single headers and stretchers on each course. It can also be laid out with 2 stretchers to one header on each course, called "double stretcher Flemish."

The appearance can also be changed with varied colored brick, such as red stretchers and black headers, or any other combination of colors. In cross bonding it is best to have the first 2 courses full headers, and snap headers for the next 4-5-6 courses, depending on the local building code. The full headers should always be laid on 2 succeeding courses. This will only be 66% of transverse bonding, which is considered ample cross bonding on a 12" wall, which is the average size of a wall.

DUTCH BONDS

The Dutch bond is also called the English Cross bond. Its main feature is that the cross joints or perpends form a series of diamonds on the face of the wall. This is another of the true fundamental bonds used in brick construction. With the aid of varied colored brick many desirable patterns can be carried out. Like the English bond it has more than one method of starting the corner. Most of the methods have a stretcher course on one side and the header course on the other side on the same course.

But there are other methods now in use that produce the diamond effect and still have the headers of the return corners on the same course. The most desirable corner for strength should have a full stretcher on the stretcher course, but this method will defeat the continuity of the diamond effect on both sides of the corner. Whenever this bond is specified it should be laid out on paper so that the best effect can be produced.

As this bond calls for headers on every other course, and as it would not be practical to lay full headers on every course shown, it is good practice to lay the full headers only on either the sixth, seventh and eighth course, and put snap headers in between these full header courses. On the more important jobs the cross joints are plumbed and marked, to insure plumb joints and perfect effect of the bond.

PATTERN BONDS

Pattern bonds are strictly ornamental bonds, and should never be a part of the wall structurally. This is because of the absence of full headers in their make-up. Such patterns as the diamond units and their variations—herringbone, basket weave and diagonal have no headers and can only be tied in with wall ties. (Most patterns have considerable cutting of brick and should always be laid out on paper in full size.)

This is to enable the bricklayer to mark the exact size of the cut. This method may be longer due to the time required to draw out a portion of the pattern, but it can easily be made up when one considers that the cuts will be cut to the right size and avoid the "cut and try" method which is often practiced in the trade.

The laying out of the patterns will also center the job more accurately. The unit patterns may be arranged to fit any particular portion of the wall by cutting or extending of the units. The herringbone, basket weave and diagonal patterns may also be laid of the "flat", that is, with the bed of the brick faced up.

ESTIMATING BRICK REQUIREMENTS

To estimate Brick required per 100 sq. ft. of solid Brick wall ½" Mortar joint Common (Stretcher) bond with header course every 6th course:

4" Walls 616 Common Brick, 7.2 cu. ft. of mortar

8" Walls 1232 Common Brick, 19 cu. ft. of mortar

12" Walls 1848 Common Brick, 30 cu. ft. of mortar
Face Brick backed with Common Brick—Full header course every 6th course ½" Mortar joint

8" Walls 720 Face Brick, 512 Common Brick, 19 cu. ft. of mortar

12" Walls 720 Face Brick, 1128 Common Brick, 30 cu. ft. of mortar.

The following correction factors are applied to 4" wall quantities to estimate the required number of face brick in various bonds:

Common bond with full header every 5th course 1/5

Common bond with full header every 6th course 1/6

Common bond with full header every 7th course 1/7

English bond, alternate courses full headers 1/2

Flemish bond, alternate stretches and full headers each course 1/3

(Add to Face Brick and deduct from back up brick).

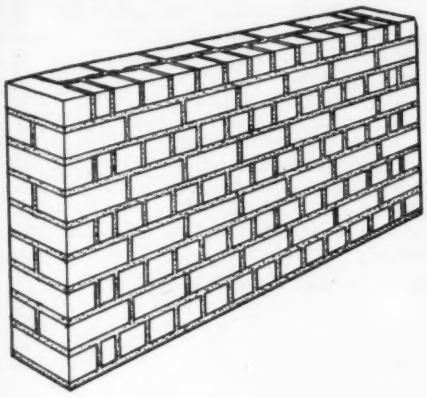
Brick Veneer

The use of Brick Veneer as an outside finish for houses is quite common. It presents the same exterior appearance as a solid brick wall. It is applied over wood framing, laid in running bond—full stretcher courses—and fastened to the frame wall by means of a corrugated metal wall tie laid in the mortar and the other end nailed into the studding. These wall ties are used every fifth course and placed every 3 bricks apart.

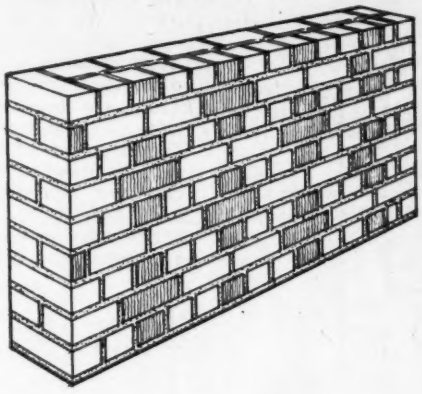
A 4" brick veneer wall per 100 square feet of surface requires 616 brick, 7.2 cu. ft. mortar and 70 wall ties.

In new construction which is to be brick veneered, 12"

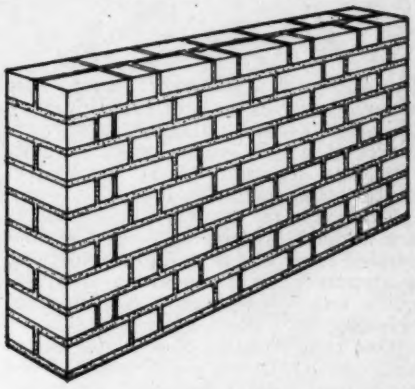
English Bond Wall



Dutch Bond Wall



Flemish Bond Wall



concrete block are carried to the grade line where the brick veneer begins. The 4" brick veneer wall is then backed up with 8" concrete block to the height of the basement wall.

Brick Sills and Soldier Courses

Ordinarily, brick sills are less expensive to install than a conventional stone sill. The brick for these sills are laid on edge and pitched toward the outside of the wall. Usually they are allowed to project 1½" to 2" beyond the face of the wall to form a drip for the sill.

Projector soldier courses (brick laid on end) laid on the angle iron over doors and windows are used for decorative purposes, or to "set off" a door or window opening.

To Estimate: Lintels and sills are computed by the linear foot. Brick, when laid on edge or end, commonly called "row lock" or "soldier" courses, will average 4½ brick per lin. ft. and 1 cu. ft. mortar for 10 l.f.

Brick Piers

Number of brick required:

Brick Piers per lin. ft. in height	½" joint	When size of brick & mortar joint is not known figure
8 x 8	9	10
8 x 12	13¼	15
12 x 12	21¼	22½
12 x 16	26¼	30
16 x 16	35	40
20 x 20	55	62½
24 x 24	80	90

In piers 12 x 12 and over in size a saving can be made by filling in behind the face brick with common brick.

A 12 x 12 pier would use each foot in height 18 face brick and 2 common brick

A 12 x 16 pier would use each foot in height 24 face brick and 4 common brick

A 16 x 16 pier would use each foot in height 28 face brick and 8 common brick.

Brick Floors and Walks

To estimate: Brick flooring per 100 sq. ft.—floors may be laid as follows:

	Brick	Cu. ft. mortar
(a) Flat—basket weave design and require.	450	3.0
(b) On edge—basket weave design and require	700	7.0

Figure 1 cu. yd. concrete per 100 sq. ft. (for base 3" thick).

Brick Steps

To estimate: approximately 10" tread and 7½" riser will require 8 brick per l.f. and 2 cu. ft. mortar per 10 lin. ft.—also add 1 cu. ft. concrete per lin. ft. for reenforcing.

Mortar

See Concrete.

Mortar Color

See Concrete.

Chimneys

A chimney is an integral piece of masonry from its foundation to top and may contain one or more flues and fireplaces. A flue is a space or passage in a chimney provided for the purpose of conducting smoke, fumes or gases to the outside air. A fireplace is an opening built into a chimney to contain an open fire and so designed that it will radiate heat into the room and deliver all smoke into its flue.

The effective operation or draft of a flue is influenced by its size, height and freedom from leaks and obstructions. The minimum height of a chimney is established by its relation to nearby structures, therefore, the top of of a chimney should extend at least 3 feet above an adjoining flat roof or parapet wall and at least 2 feet above the highest ridge of a pitched roof, unless otherwise required by the local building ordinance. This is to prevent down drafts resulting from air currents curling over walls and roofs. Nearby trees will produce the same results and consideration should be given to this condition.

Chimneys located entirely inside a building are more efficient because they do not become chilled by outside air but retain their heat and consequently give a better draft. For this reason, chimneys built in exterior walls may be made more efficient by increasing the thickness of the flue walls to retain as much heat as possible. No change in size or shape of the chimney should be made within 6 inches above or below the roof construction where they intersect.

Flues should be built as straight as possible, since offsets increase friction, collect soot and may create a fire hazard. If offsets are necessary, their slope should not exceed an angle of 30 degrees from the vertical and the full area of the flue should be maintained throughout. For the safest and most efficient operation, flues should be smooth and contain as few joints as possible. Fireclay flue lining is excellent and is required in many building ordinances. It produces smooth inside surfaces, few joints, is highly fire resistive and simplifies the construction of the chimney.

Not more than two flues should be built in the same chimney space, and additional flues should be separated by a smoketight dividing wall of brick, 4 inches thick. When two linings are set together, their joints must be staggered at least 7 inches apart. Each flue serving a heating boiler, furnace or fireplace should be separated or surrounded by at least 4 inches of brick masonry. The best chimney design provides for the separation or surrounding of every flue with 4 inches of brick, which provides more satisfactory draft, greater fire safety and increased stability of construction.

To estimate materials required:

Flue Size	Number of Brick	Cu. ft. of Mortar
1— 8 x 8	27	.05
1— 8 x 12	31	.06
1—12 x 12	36	.08
2— 8 x 8	45	.10
2— 8 x 12	58	.12
2—12 x 12	68	.15

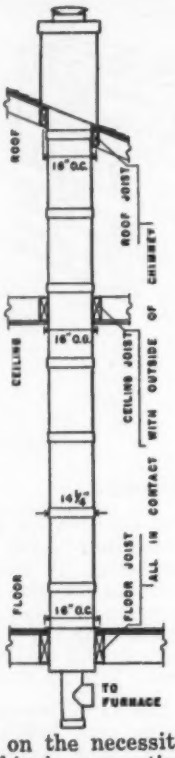
On a cubic foot basis, figure 20 brick per cubic foot.

Prefabricated Chimneys: There are several types of prefabricated chimney units on the market. They require no masonry protection or concrete footings, and are approved by the Underwriter's Laboratories, Inc.

Prefabricated or precast chimneys are supplied in sections, may be suspended from the framing members of a structure. Consequently they require less space than a conventional chimney.

One type consists of a double metal wall, with the space between filled with insulation. Another, approved for use as a flue with gas heat only, has a single wall of asbestos cement.

A popular type, adaptable to both new and existing homes and farm buildings, consists of a metal case within which a tile flue is held by a layer of vermiculite concrete. This unit is extremely light in weight.



Fireplaces

Too much emphasis cannot be placed on the necessity for good design and thorough workmanship in connection with fireplaces. There are more fireplaces that smoke than those that do not.

A fireplace consists of an ash pit (or basement fireplace), chimney and fireplace section to house hearth, damper, etc., tapered reduction to chimney proper.

To estimate: Figure total plan sizes in height, width, and depth solid in cu. ft. to a point 4 ft. above basement floor and figure 15 brick per cu. ft. for quantity.

Figure exposed face of fireplace mantel in sq. ft. and allow 7 brick per sq. ft. of exposed area (this will be determined by width, height, and depth).

Figure fire brick for backing at.....50 pcs.
Figure fire brick for hearth floor..... 20 pcs.
Figure quarry tile for front of hearth.....10 sq. ft.
Figure 1 bag of fire clay for mortar.
1 ash dump—8". 1 ash pit door—10".
1 3" x 3" x 36" angle iron. 1 36" dome damper.

CLAY PRODUCTS FROM SPECIAL TYPES OF CLAY

A special clay that withstands heat without cracking is used to make flue lining, fire brick, fire clay, stove pipe and fittings, and artistic chimney pots.

Flue Lining—Flue linings are made either round or square. However, the square shape is used in brick chimneys. The most commonly used sizes are 8 x 8, 8 x 12 and 12 x 12, and are manufactured in 2 foot lengths. Flue lining should be continuous from the chimney footing to the top of the chimney.

To estimate—The number of lineal feet from one foot above the damper to the top of the chimney is the amount of lineal feet of flue lining required.

Stove Pipe and Fittings—Used to construct temporary chimneys.

Chimney Pots—Used on the tops of chimneys in certain architectural types of buildings.

Fire Brick—Fire brick are made in many different shapes and sizes for lining steam boilers. In residential building they are used to line the inside of fireplaces. The usual size is 2¼ x 4½ x 9. Their weight is approximately 7 lbs. Figure 7 brick per sq. ft.

Fire Clay—Used to lay fire brick. 42 pounds of fire clay will lay 100 fire brick.

Drain Tile—Because of their ability to absorb moisture and water they are used to drain farm land and to remove excess moisture conditions around the foundations of a building. They are also used for the drainage field of septic tanks. They should never be used for sewers or conduits for carrying off waste water.

Wall Coping—Made from clay, vitrified and salt glazed, for use as the covering of masonry parapet walls to protect the walls from disintegrating from weather conditions.

Sewer Pipe—Are round pipe, two or three feet long and from three inches to 36 inches in diameter, made of clay, burned and salt glazed to give additional hardness, which are used underground for waste disposal. They resist acids, alkalis, destructible chemicals or gases without decomposing, crumbling, corroding or rusting away. They are economical, are easily installed and give long life. The spigot end of the pipe should always point in the direction of the flow and the joints must be filled with cement mortar or a bituminous compound. Sewer pipe can now be bought with a compound already in the ell end of the pipe to seal the joint (Slip Seal). The various fittings or connections are described in the manufacturer's price list following.

Some Typical Sewer Pipe Fittings

STRUCTURAL CLAY TILE

This is a very useful structural material in which clay is formed into a hollow masonry unit having parallel cells and burned to hardness. It is used for floors, roofs, partitions, walls, and foundations. Because of its lightness, strength, fireproof qualities and resistance to moisture, it has become a widely used and very satisfactory building product.

Structural clay tile may be broadly classified into four groups, based upon the use for which they are intended. They are:

1. Structural Wall Tile
2. Fireproofing Tile
3. Structural Floor Tile
4. Miscellaneous Tile

Structural wall tile, which may be either loadbearing or non-loadbearing, is used for the construction of exterior and interior walls and partitions.

Fireproofing tile is used for protecting structural members, particularly steel girders, beams and columns against fire.

Structural floor tile is used in tile arches, and as tile fillers in conjunction with reinforced concrete joist, or as span tile in combination with precast reinforced tile and concrete beams.

Miscellaneous tile units include structural roofing tile, conduit, units for the construction of storage structures such as silos and bins, shapes such as raggle blocks, copings, sills and lintel tile, filter and drain tile.

Section 21 Farm Buildings, Equipment, Supplies

THE FARM MARKET

The American farm is undergoing a change in planning and operation, as marked and distinct as has occurred in industry. The modern farm is an efficiently managed and conducted business, and in order to be so, its buildings, equipment, and facilities must be designed and built to fit into the new methods and practices.

Most of the farms are now mechanized. This was the first and most necessary step toward farm modernization. Next must come new farm buildings and homes, a phase of improvement that still lies ahead.

In the current period of national emergency, high farm production and prosperity is essential. For the lumber and building material dealer it offers a market as unfettered by restrictions and regulations as will exist in the country.

But on the farm, as in the urban areas, the customer has come to think in terms of packages. For example, when a farmer considers a new barn, he considers it in terms of the complete unit, ready for service.

This fact has been proved by dealers who have intensively sold complete farm buildings in their trading area. This section, therefore, is devoted to a review of those items and products that fit into farm building packages.

There is a wealth of good material available about modern farming. A dealer interested in such information may secure it from the following sources:

Farm Construction publications of his State University.

Explanatory booklets of manufacturers, especially lumber, steel, asbestos, aluminum, copper, insulating board, insulation, cement, clay products, etc.

Literature of Farm Machinery and Equipment Manufacturers.

Farm Construction manuals of all building industry associations.

Get on the mailing list of people who issue farm bulletins regularly.

The salesman will find it greatly helpful frequently to contact and consult with:

His County Agent.

Personnel of State Agricultural College.

U. S. Department of Agriculture.

Farm Engineers and Specialists in Manufacturing Companies and Associations.

Insurance Adjusters and Agents.

Farm Real Estate Companies.

Farmer's Clubs and Organizations.

4-H Clubs.

Banks and Loan Agencies.

Rural Electrification Personnel and Government Inspectors.

SALES ITEMS

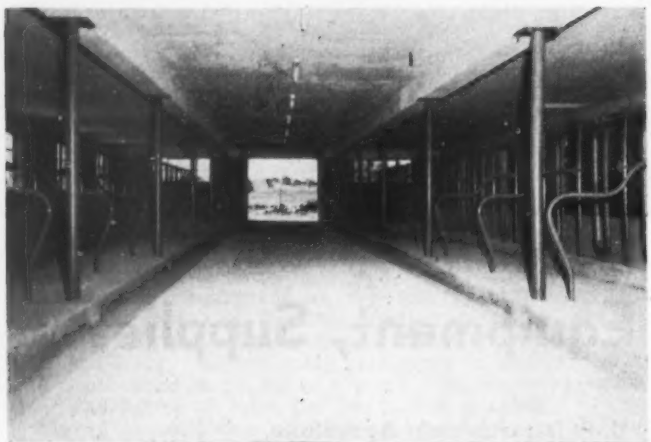
Housing the Hog

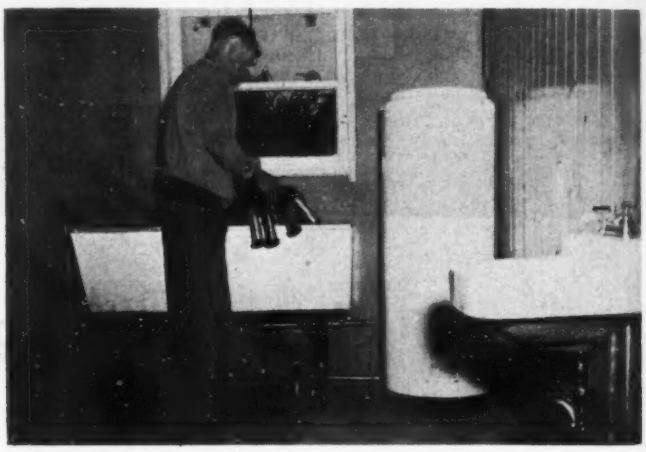
A-Type Hog House
Arched-roof Hog Houses
Barns
Breeding Rack & Stanchion
Brooder Houses
Brooder Stoves
Brooders
Chutes
Colony Houses
Cots
Dipping Vats
Electric Pig Brooders
Farrow Houses
Feeding Floors
Fountains
Loading Ramps
Mineral Feeders
Movable Houses
Oils
Oilers, Pasture Shade & Shelter
Pens
Pig Creeps
Rotary Oilers
Rings
Scrapers
Self-Feeders
Shed Roof Hog Houses
Shipping Crates
Sun Shades
Troughs
Vaccinating Racks
Watering Trough
Wallows

Housing Cattle

Arched-Roof Barns
Beef Cattle Barns
Breeding Racks & Stalls
Stalls
Bull Pens
Calf Barn
Calf Feeders
Cattle Chutes
Cattle Feeders
Cattle Guards
Cattle Sheds
Gambrel Roof Barns
General Purpose Barns
Grain Bunks
Loafing Sheds
Mangers
Milking Pens
One Story Barns
Open Shed Milking Stables
Self Feeders
Silos

THE SECOND STEP in farm modernization, following mechanization, lies in the direction of new and improved buildings. The above before and after scenes of the same farm is a graphic example of what this market will mean to the retail lumber and building products dealer.





ALONG WITH new buildings goes the fixtures and equipment. Research in efficient farm practices has brought out new ways to arrange and equip farm building interiors. The dealer who keeps abreast of these new ideas is in better position to offer a complete farm building service.

Corrals
Cupolas
Dairy Cattle Barns
Dairy Cold Box
Dehorning Chutes
Feed Locks
Feeding Bunks
Feeding Floors
Gable Roofed Barns
Stalls
Stanchions
Summer Shelters
Tanks
Troughs
Two Story Barns
Ventilators
Waterers

Housing Sheep

Dipping Vats
Feeding Racks
Feeding Troughs
Lamb Brooders
Lamb Feeders
Sheep Barns
Sheep Sheds
Sheep Pens

Housing Horses

Corrals
Horse Barns
Range Shelters
Shelter Pens

Housing Poultry

Baby Chick Waterers
Benson Type Poultry Feeders
Brooder Draft Controls
Brooder House Heaters
Brooder Houses
Chick Feeders
Chick Fountains
Colony Brooder Houses
Dropping Boards
Dry Mash Feeders
Egg Shipping Cases
Flock Feeders
Fowl Killers
Heated Fountains
Hen Feeders
Hovers
Incubators
Poultry Alfalfa Racks
Poultry Coops
Poultry Fencing
Poultry Helmets
Poultry Netting
Poultry Pickers
Poultry Scalders
Poultry Scales
Poultry Shelters
Poultry Sun Parlors
Range Feeders
Range Shelters
Roosting Frame for Turkeys
Roosts
Sanitary Runways
Self Cleaning Nests
Shipping Cases
Inside Mash Hoppers
Laying Houses
Laying Nests
Laying Traps
Leg Bands
Movable Roosting Shelters
Oyster Shell Feeders
Shipping Coop
Straw Loft Poultry Houses
Turkey Nests
Waterers
Wing Bands
Wire Baskets

Housing the Products of the Farm

Combination Hog Houses & Grain Storage
Combination Poultry Houses & Grain Storage
Corn Cribs
Granaries
Grain Bins
Grain Boxes
Grain Elevators
Hay Barns
Hay Sheds
Pole Corn Cribs
Silos
Stack Covering

Housing Machinery

Machine Sheds
Combination Shed & Shop
Combination Shed & Garage
Machine Shelters
Laminated Rafters for Curved Roof Sheds

Yard—Fabricated Portable Farm Buildings

Poultry Houses
- Metal
- Wood
- Asbestos

Hog Houses
- Metal
- Wood
- Asbestos

Milk Houses
- Metal
- Wood
- Asbestos

Calf Sheds
Tanks
Hay Racks
Hog Troughs
Utility Houses
Bunk Houses
Farrowing Houses
Road Side Stands
Grain Bins
Brooder Houses
- Hog
- Chicken

Self Feeders
Loading Chutes
Billbords
Smoke Houses
Tenant Houses
Windmill Towers made with Lumber Connectors

*CONTINENTAL

Brand Name that Builds

A BETTER FARM MARKET

● Farmers like Continental steel products. They like the years of service they get from Continental fence—and the pasture-planning help Continental has provided, by mailings to farm homes, and through a sound dealer organization. Here is a trusted and dependable brand name that creates sales opportunities for steel products and for other things you sell. You'll like doing business with Continental.

83 Steel Products for Farm & Home

*Flame-Sealed brand currently not available due to zinc-for-defense requirements.

*Trade Mark Reg. U. S. Pat. Off.

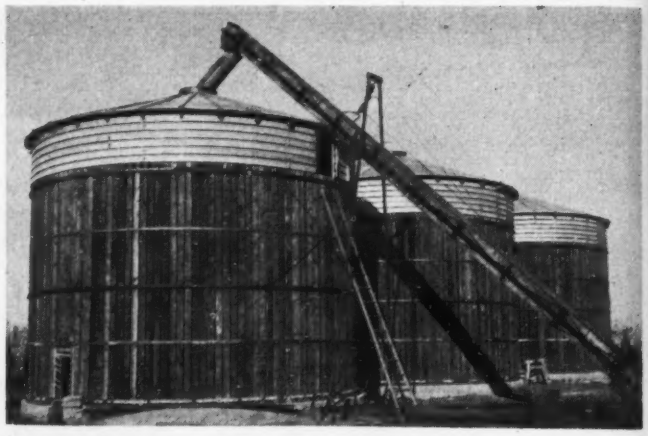
CONTINENTAL STEEL

CONTINENTAL STEEL CORPORATION

GENERAL OFFICES • KOKOMO, INDIANA

PRODUCERS OF — Farm Fence, Posts, Gates, Barb Wire · Steel Roofing and Siding, and Fittings · Nails, Staples, Lawn Fence, Wire Products

THIS one-room milk house meets all milk ordinances. It is of frame construction with ¼-inch tempered hardboard on the exterior and 5/16-inch hardboard on the inside.



THE RECENT TREND for more and more of the nation's grain crop to be stored on the farm has increased the market for storage buildings and bins of all types.

Hardware for the Farm (See Hardware Section)

Barn & Garage Door Stops
Barn Door Hardware
Barn Door Latches
Barn Door Pulls
Barn Door Rollers
Barn Door Stays
Barn Door Tracks & Hangers
Chain Bolts
Cow Bells
Cow Stalls
Crow Bars
Dinner Bells
Door Handles & Pulls
Door Holders
Door Knockers
Electric Fly Screens
Fire Extinguisher
Foot Bolts
Gaskets
Gate Hinges and Fasteners
Hand Pumps
Hay Forks
Hay Knives
Lanterns
Litter Carriers
Scythes
Sheep Bells
Sickles
Stall Guards
Tank Heaters
Tomato Sticks
Turkey Bells
Well Buckets
Well Chains
Wire Stretchers

Farm Fencing and Gates

Barbed Wire
Chick Mesh Poultry Fence
Close Spaced Poultry Fence
End Posts
  12½ Gauge
  11 Gauge
  11 Gauge
  9 Gauge
  9 Gauge
32" Hog and Field Fence
Post Drivers
Poultry Netting
Spiral Stays
Steel Corner Posts
39" Stock and Field Fence
  12½ Gauge
  12½ Gauge
26" Hog and Field Fence
  14½ Gauge
  14½ Gauge
  12½ Gauge
  12½ Gauge
  11 Gauge
  11 Gauge
  11 Gauge
  9 Gauge
  9 Gauge
  9 Gauge
47" Stock and Field Fence
55" Stock and Field Fence
Wire Stretchers
Gate Posts
Side Wall Gates
Tilting Gates

FENCING

Barbed Wire—Sold in 80 rod rolls. Two gauges, 14 and 12½. Two types—2 point and 4 point. Two spacings—4" and 5".

Farm Fence—All Purpose—Sold in 330 ft. rolls. 3 Weights: Light, 11 Gauge top and bottom wire; 14½ gauge live and stay wire; Medium, 10 gauge top and bottom wire: 12½ gauge live and stay wire; Heavy, 9 gauge top and bottom wire; 11 gauge live and stay wire. Heights 26", 32", 39" and 47".

Galvanized Smooth Wire—Comes in 3 gauges—9, 12 and 14.

Heavy Weight Poultry Fences—Comes with variable mesh ranging from 1½" at bottom 5" at top; also in 48", 60" and 72" heights. Stay wires are 6" apart. Top and bottom wires 11" gauge. Live and stay wires 14" gauge.

FENCING is a product used to some extent on every farm, and is a feature of equipment that most farmers take particular care in maintaining. It has made a good sales item for dealers in rural areas for many years.

Poultry Netting—Made from full-gauge steel wire—galvanized before weaving. Use 2" mesh for large poultry, 1" for small chicks. Comes in 150 ft. rolls. Chick netting comes 12", 24" and 36" lengths. Poultry netting comes 48", 60" and 72".

Welded Wire Pen & Utility Steel Fabric—For poultry floors, corn cribs, trellis, feeding racks, tree guards, sorting screen, etc.

Mesh sizes, 1 x 1, 1 x 2 and 2 x 4.

Gauges 15, 14 and 12½.

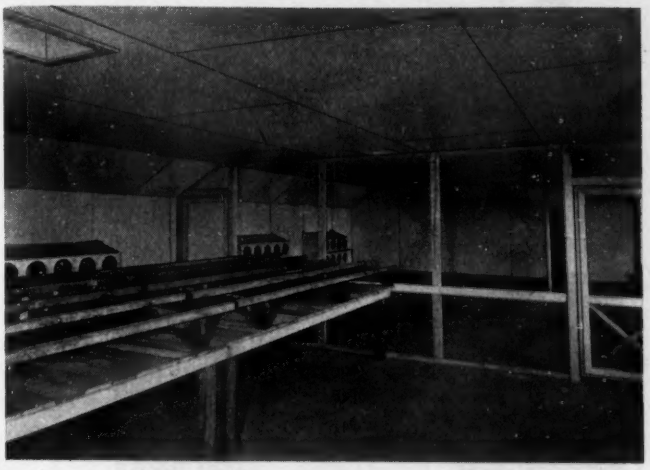
Widths 24", 36" and 60".

CEMENT

Cement and Concrete on the Farm

Approaches
Bins
Cattle Guards
Cess Pools
Circular Brick Cistern
Concrete Cistern
Concrete Cistern Filter
Concrete Floors and Foundations for
  Barns
  Cattle Pens
  Corn Cribs
  Hog Houses
  Milk Houses
  Poultry Houses
  Storage
Concrete Manure Pit
Concrete Milk Cooling Tank
Concrete Storage Tank
Concrete Stock Tanks
Concrete Wallowing Pools
Culverts
Drain Tile
Driveways
Feeding Floors
Fence Posts
French Silos
Hog Wallows
Ice Houses
Manure Pits
Masonry Smoke House
Septic Tanks
Silos
Tanks
Terraces

Paint on the Farm—See Paint Section



HOW INSULATION and repair can be combined is illustrated in the "before and after" pictures above. By lining the walls with insulating board and building a ceiling of the same material, a badly dilapidated poultry house has been converted from a worthless eyesore to an efficient and attractive production building.

INSULATION ON THE FARM

Send for Farm Building Insulation—Insulating Board Institute, 111 W. Washington St., Chicago 2, Ill.

Send for Insulation on the Farm—U. S. Department of Commerce, Washington, D. C.

Send for Rock Wool on the Farm—Mineral Wool Association, New York.

The farmer of today is no different from the city dweller when it comes to home comfort. He too, wants a house that is easy to heat and one that will be cool during hot summer nights. Insulation is more important to the farmer in winter than to the city fellow, because only 14 percent of the farms in our nation have central heat. This means that the farmer must fire many stoves throughout the house to keep warm.

In summer a cool house is a blessing after riding the hot tractor in the blazing sun from dawn to dusk. With a seven day week and such long hours, rest and comfort are more important than anything else for the farmer's few leisure hours.

Remember that the farmer knows the value of insulation better than most customers as he uses so much of it in his producing and storage buildings. Because of this it is easier to sell the farmer a complete job than almost any of your other customers. This is especially true today, when less other merchandise is available and he has more money than usual to spend.

Batt, blanket, blown, board, reflective or fill types of insulation can be used in farm homes.

FARM INSULATION CHECK CHART

House: Insulate top ceiling. Blow sidewalls of frame houses. Decorative board for inside walls and ceilings.

Pump House: Insulate sidewalls and ceilings by placing insulation in studs and rafter spaces. Wrap exposed lines with pipe insulation.

Poultry House: Insulate sidewalls and ceilings, using board insulation, never under 25/32 inch.

Machine Shed: Insulate walls and ceilings of workshop only.

Beef Cattle Barn: Normally needs no insulation.

Dairy Barn: Insulate sidewalls and ceiling even if hay is stored overhead. Vapor sealing and ventilation important.

Milk House: Insulate sidewalls and ceilings for workers' comfort and to protect plumbing. Insulate cooling tank and be sure insulation is set in hot asphalt.

Hog House: Insulate sidewalls and ceilings. Vapor seal over all insulation is essential, as paper on insulation is often not enough.

Potato and Fruit Storage: Insulate sidewalls and ceilings. Vapor seal very essential.

POULTRY HOUSING

Floor Area: Approximately 2½ chicks per square foot. A 10x12 foot brooder house will shelter 300 chicks with no over-crowding.

Sun Parlor: Mesh covered panels which can be hooked together easily, provide an inexpensive open air exercise pen. If a frame covered with netting is used for the floor, sanitation is assured. On bright days with a slight wind, these exercise pens are usable, if the side panels are covered with tough building paper. Some poultry men have constructed separated panels covered with building paper or muslin and fastened them against the wire-covered panels in chilly weather.

Facing: Housing should always face south.

A 10x12 foot brooder house is needed in conjunction with a 20x20 foot laying house. To maintain a production farm flock of 100 to 125 hens, about 300 young chicks are needed each year. After the death losses and necessary cutting are subtracted, the number of pullets available for addition to the flock will balance the losses sustained by the flock.

Multiple Poultry Houses

The multiple type of poultry house is popular among large scale producers because this type of a building cuts the cost of construction, maintenance and caring for the birds.

The principal difference in this type of unit is the fact that the building is built two, three, four or five stories high. In this way foundation and roof cost are charged off to a larger number of birds.

This first cost factor is important but other advantages are as follows:

1. Low cost of maintaining roof per bird in years to come.

2. Pens are cooler in summer and warmer in winter, due to the fact that less wall and roof area are exposed to outside temperatures.

3. It is more pleasant and easier to care for the birds. All birds are under one roof, eliminating travel from one house to another, as in small units.

4. Time Saver—One man can care for two to three times as many birds as in one-story type—thus cutting expenses.

Ventilation: Ventilation in this type of unit is not difficut to handle but the flue system is different.

Construction Hints

Skids: 4" x 4" x 14'. Treated material preferred.

Sills: 2" x 8" x 10' bolted to skids.

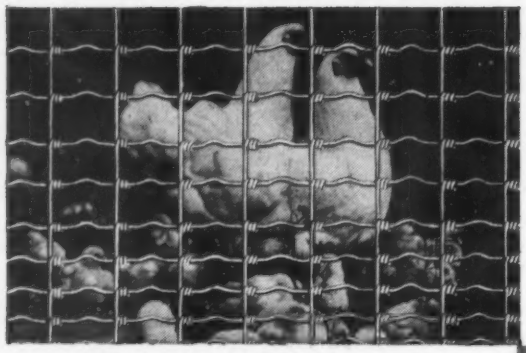
Joists: 2" x 4" x 12'—2 feet on centers.

Floor: Double—if early brooder and broiler production is planned. Shiplap on joists, building paper and then matched flooring. Single—if late brooding is planned. Should be matched flooring.

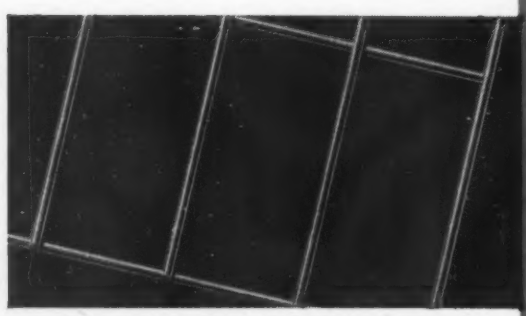
Walls: 2x4 inch studs placed 2 feet on centers. Covered with sheathing finished with flexboard. Rigid construction needed to withstand the strain of moving.

Roof: 2x4 inch rafters placed 2 feet on centers. Shiplap should be used for sheathing if prepared roofing is used. 1x4 inch boards spaced 2 inches apart if shingles are used. One foot of overhang on all sides is recommended.

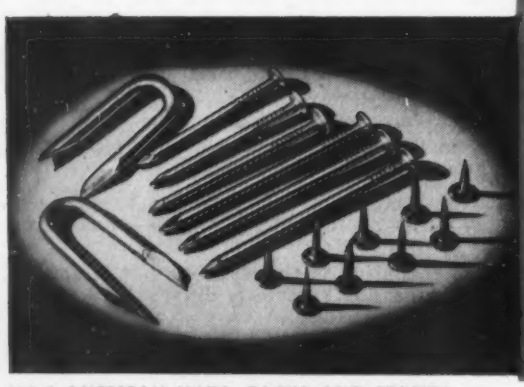
American Fence brings you



U·S·S AMERICAN POULTRY FENCE. Made in two specifications with ample galvanizing. Wires are closely spaced at bottom to keep small chicks in and animals out. No bottom boards needed.

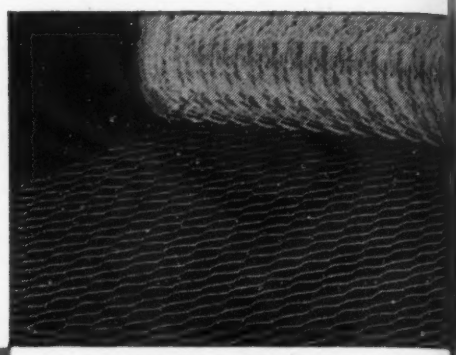


AMERICAN GALVANIZED UTILITY WELDED WIRE FABRIC. Used extensively for turkey raising, fur farming, poultry batteries and a wide variety of other uses.

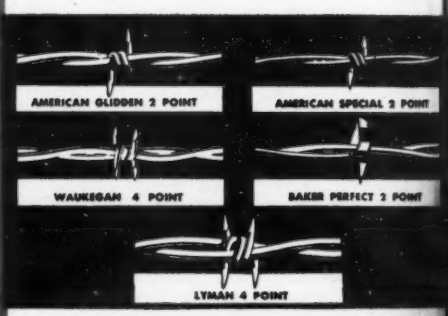


U·S·S AMERICAN NAILS, TACKS AND STAPLES. Made of steel that does not bend easily. Points are sharp and well made. Hundreds of styles to choose from for various applications. Can also be furnished in stainless steel for permanent rust resistance.

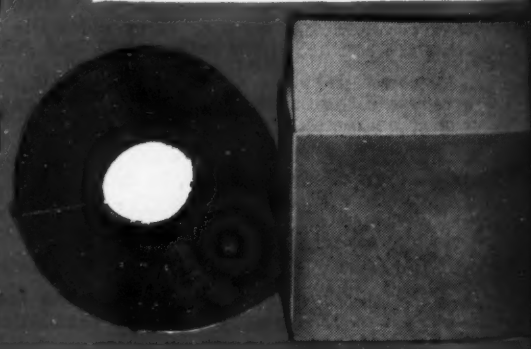
U·S·S AMERICAN STEEL POSTS. Can be driven easily without digging post holes. Big husky posts with slit wing anchors that root the posts into the ground. Made in "U" and studded "T" styles for extra strength.



U·S·S AMERICAN POULTRY NETTING. Stretch straight without bagging. Evenly coated w zinc before or after weaving to resist cor sion. U·S·S American Hex-Cel Poultry N ting gives years of extra service.



U·S·S AMERICAN GALVANIZED BARBED WI A year 'round good seller. Five styles in 2 and 4-point barbs. Convenient 80-rod lengt on non-collapsible wire reels. Barbs are sha and evenly spaced.



U·S·S AMERICAN TIE WIRE FOR AUTOMATI BALERS. Furnished in rewound coils to fit eac make of automatic baler. A product pioneere by American Steel & Wire Company. It's strong, tough steel wire that works smoothl and evenly in any baler. Specially package and protected . . . ready for use. When order ing, specify the makes of balers for which th wire will be used.

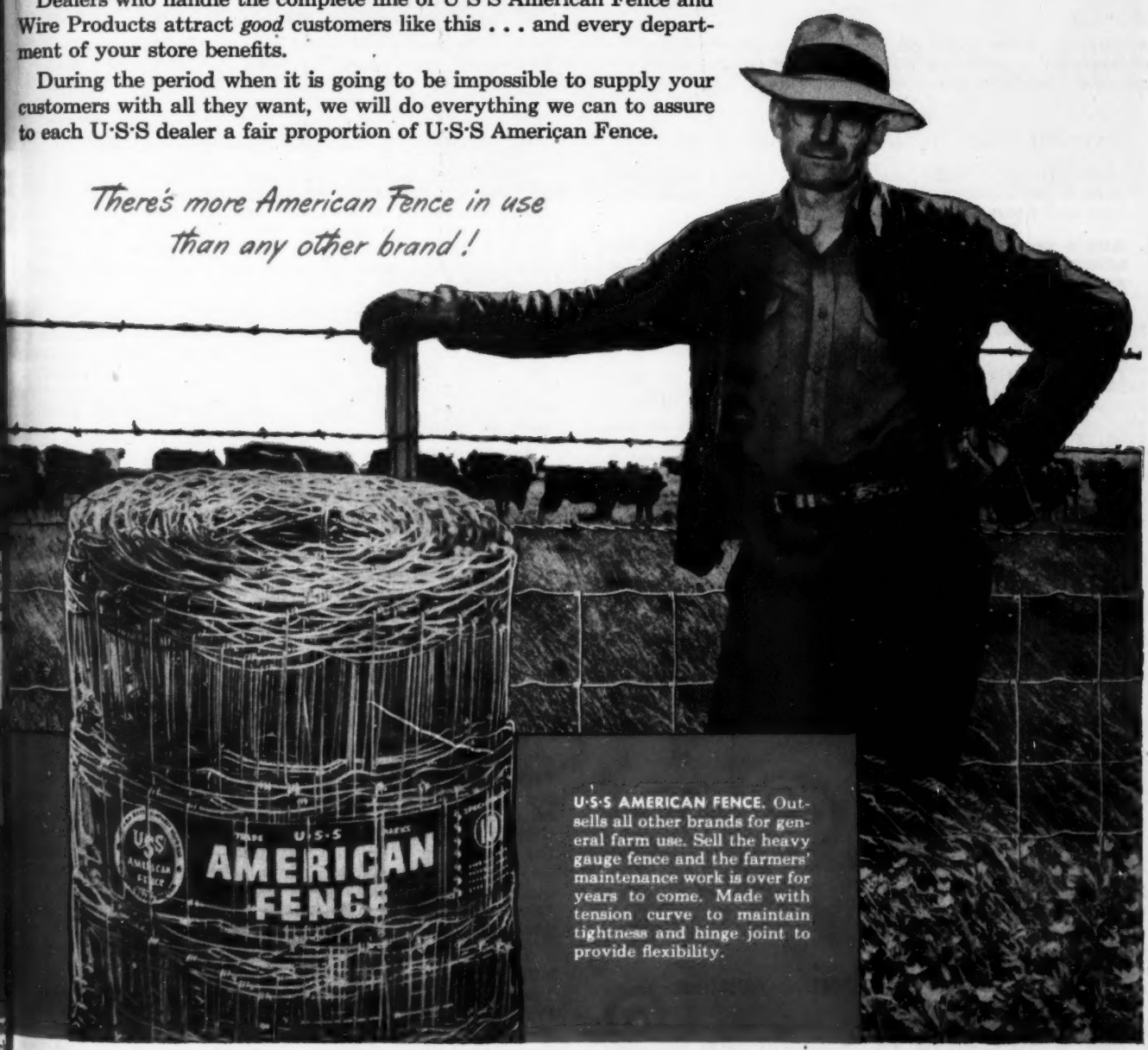
the country's best customers

One good farm customer may be worth a dozen city customers. For example, the man shown below buys hardware and supplies to operate farms totalling more than 10,000 acres. He orders fence in terms of miles rather than feet and buys related products in equally big amounts.

Dealers who handle the complete line of U·S·S American Fence and Wire Products attract *good* customers like this . . . and every department of your store benefits.

During the period when it is going to be impossible to supply your customers with all they want, we will do everything we can to assure to each U·S·S dealer a fair proportion of U·S·S American Fence.

There's more American Fence in use than any other brand!

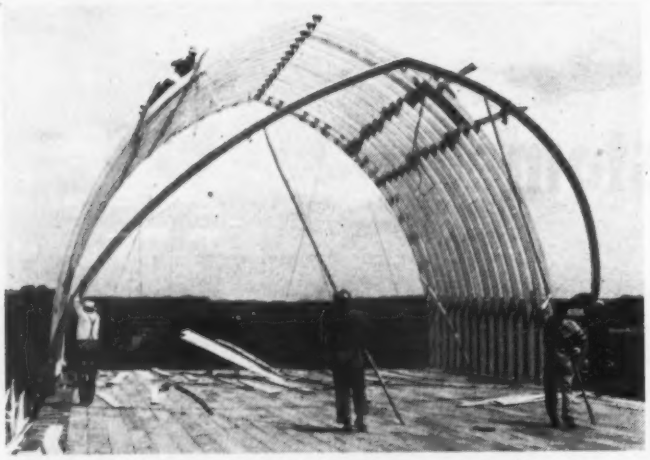


U·S·S AMERICAN FENCE. Outsells all other brands for general farm use. Sell the heavy gauge fence and the farmers' maintenance work is over for years to come. Made with tension curve to maintain tightness and hinge joint to provide flexibility.

AMERICAN STEEL & WIRE DIVISION, UNITED STATES STEEL COMPANY, GENERAL OFFICES: CLEVELAND, OHIO
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO • TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

U·S·S AMERICAN FENCE and WIRE PRODUCTS

UNITED STATES STEEL



BECAUSE they arrive on the job site ready for immediate use, construction with laminated structural members is remarkably simple and economical. All labor-consuming on-the-job cutting is eliminated.

LAMINATED glued wood rafters have brought engineering into farm buildings as never before. The Gothic form arch, made possible by glue laminating, is the most structurally efficient framing obtainable.

VENTILATION SUGGESTIONS FOR BARNS

1. One of the best indications of an improperly ventilated barn is the condensation of moisture on the walls, ceilings and floors.

2. Ample ventilation is indispensable for maintaining the animal's power of disease resistance. A cow needs to be supplied with twice the weight of pure air that she does of food and water.

3. The essential parts of an effective ventilating system are:

   (1) The inlets for fresh air—the total sum of their area should equal or exceed by 10% the area of the outlets.

   (2) The outlets for foul air—these should be so constructed that their sides are air-tight and afford complete insulation so that air within flue will not be cooled too rapidly.

   (3) The aerator on top of the barn—so constructed that the action of the wind exerts a suction on the air in the outlet flue.

4. Rate of supply of air to barns to provide pure air for classes of livestock.

	Cu. Ft. per Head Per Hour
Horses	4924
Cows	3958
Hogs	1510
Sheep	929
Hens	37

5. The following amount of out-take flues required to keep the air in the building sufficiently pure for livestock.

	Head
Horses—1 sq. ft. cross-sectional area for	5
Cattle —1 sq. ft. cross-sectional area for	5
Hogs —1 sq. ft. cross-sectional area for	18
Sheep —1 sq. ft. cross-sectional area for	24
Hens —1 sq. ft. cross-sectional area for	400

GLUED LAMINATED FRAMING MEMBERS

A good part of the potential market for laminated framing members lies on the farm. The farm building market now looms larger than at any time in the history of agriculture. No other industry is undergoing greater changes than agriculture where mechanization of almost every phase of farming is taking place. There are few farms on which there does not exist a need for new buildings of some kind, or modernization of present buildings.

Laminated rafters are functionally designed for and fabricated in a variety of shapes and sizes for dairy and beef barns, general purpose barns, hog houses, poultry houses, brooder houses, machine sheds, corn cribs, garages and utility buildings.

DEALER INVENTORY-TIPS ON STORAGE

Many dealers find it profitable to keep a limited stock of standard rafters—especially to fill urgent building needs in case of wind or fire damage. Some dealers work directly with one or two contractors and, by having a limited stock of rafters on hand, the dealer can quote a complete building on the spot and can start construction immediately.

Whenever possible, rafters should be stored in a dry place, either indoors or in an open shed, to eliminate the necessity for the additional labor of stripping and covering. Since kiln-dried lumber is used in the manufacture of these rafters, they should be given the same storage attention as other high grade finished wood products such as millwork.

However, it may be necessary to employ outside or poorly protected space. In such cases, the site of the storage pile should be well drained and protected from drifting snow. The pile of rafters should be supported by stringers in such a manner that the bottom rafters are several inches above the ground. Lath or stripping should segregate each layer of rafters. The top and ends of the pile should be protected from the weather by waterproof paper held in place by cleats so that the sides of the pile will remain uncovered to permit circulation of air around each rafter.

TECHNIQUES FOR SEASONAL DRIVES

Most dealers are familiar with the seasons when farm construction is most active. Mailings of selected literature to customer lists, timed to coincide with farm building activity, offer a proven method of promoting sales of glued-laminated framing members. To help dealers with specific proposed projects, some manufacturers offer the assistance of specified, trained local field representatives. These local field men also have available movies and displays for local meetings. Manufacturers also offer the dealers selling aids in the form of advertising mats, photographs, etc.

Take your prospect to visit farms or owners of local buildings where glued-laminated construction is used. You will find that these users will be your best salesmen. Point out the ease and speed of erection, the modern streamlined appearance glued-laminated construction affords, that these framing members are engineered and designed for the job, that this type of construction adds value to the property (whether it be a farm or a commercial building).

Photographic displays of buildings in progress of construction will help to explain building details and to point out the pleasing and streamlined appearance when completed. These photographs will show that the original erection of such buildings, as well as their alterations and additions, do not require the employment of highly specialized mechanics and equipment, that wood framing permits the selection of a wide variety of sheathing, siding and roofing materials.

Section 22 Pre-Assembly -- Prefabrication

PRE-ASSEMBLY

Pre-assembly has many features similar to prefabrication in that it involves the shop fabrication of all house sub-assemblies that can more efficiently and more economically be pre-built by such methods. In many respects, however, it is a system that has far more appeal to the retail building products dealer as it involves conventional construction methods, and can be fitted quite easily into the dealer's normal operations and services.

There is no question that the next few years will witness rapid developments in the field of pre-assembly. The public of the country has been thoroughly convinced that conventional on-site construction is too costly at the current labor rates, and there is nothing to indicate that these will be materially reduced.

Contractors and builders of large projects have proved that pre-assembly practices on the job-site of multi-unit projects has resulted in substantial labor savings. Experiments with the Industry Engineered House have indicated that the same savings may be effected by small contractors, if the dealer will provide the sub-assemblies.

Before pre-assembly methods can be generally adopted, however, the unions, contractors, architects, and dealers must all endorse and practice them. It would be foolhardy to believe that this can be accomplished in a short time, but there are influences that might force the issue more quickly than most would expect.

On a competitive market, builders who are able to construct homes of high quality for less money will get the business. Those who stay in business will be the ones who are able to keep labor man-hours at the lowest point, and pre-assembly offers that potential.

Also, experience has shown that a highly competitive market in the building field reduces the total number of units constructed by each builder. Rather than project-developments, building is scattered, and a job-site fabrication shop would not be practical.

MODULAR COORDINATION

One of the most important technological innovations of recent years has been the promotion of the modular system of coordination of design in the light construction field.

The modular system is not new, having been introduced a number of years ago. Until the development of the Industry Engineered House, however, at which time the entire industry took an active interest in modular coordination, it had not been widely adopted.

This system is based on a 4 inch module that is used by the designer in planning a structure. This unit was adopted because it was found that a majority of all building materials was supplied in measurements that were an even multiple of 4 inches. Many other manufacturers have recently altered their products to conform to this module, so it is possible to build a house today that is completely modulated.

It was also found that when the overall structure dimensions were confined to multiples of 4 feet, that further savings in materials and construction time could be effected.

In the many studies that have been made with the I-E house, it has been found that a combination of the modular system of design together with pre-assembly and other time-saving methods of construction have resulted in a saving of as much as 20% in the total cost of a house. A complete and interesting survey of these methods can be obtained from the Small Homes Council of the University of Illinois, Champaign, Ill.

UNIT PLANNING

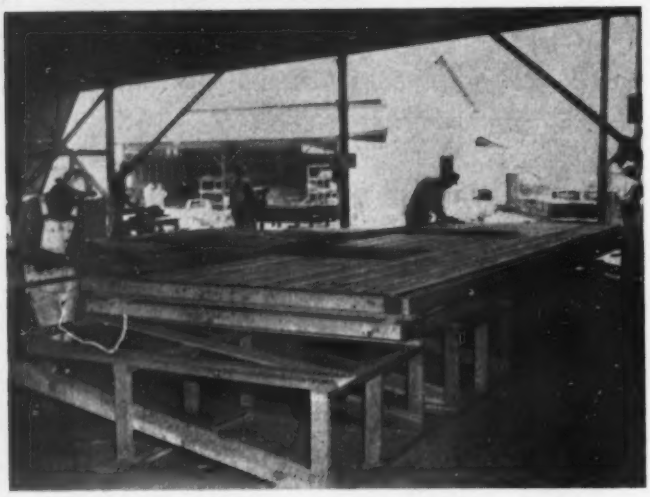
A recent study by the Small Homes Council, sponsored by the Lumber Dealers' Research Council, has brought out a still further adaptation of the modular principles. Known as unit planning, this latest advancement of house construction incorporates the standardization of construction with flexibility of design.

The achievement of this is through the use of standardized plans for a room, or group of rooms, so designed that they can be combined in different ways to form a variety of complete house plans.

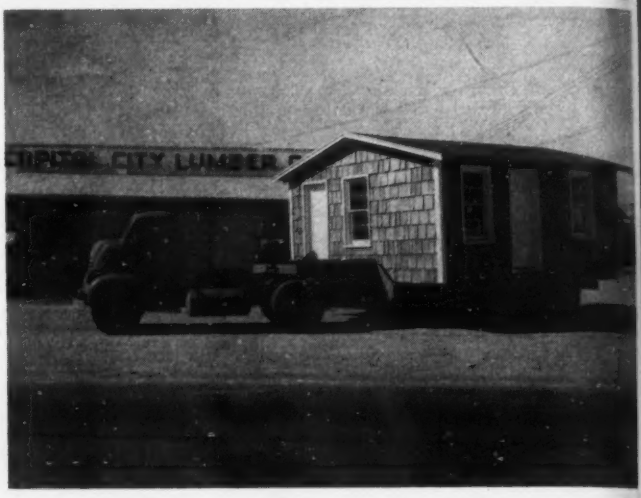
Such a system requires that each unit be carefully planned within itself without regard to the rest of the house or the exterior. For example, bedrooms in the sleeping unit must have an acceptable relationship to the bathroom and the linen closet which are also part of the unit. The bedrooms themselves must be large enough to accommodate the usual pieces of bedroom furniture, and they must have a predetermined amount of storage space.

Such a unit of bedrooms and bath will answer the needs for a dozen houses, no two of which may be alike except for this inner relationship within the rooms of the unit.

Since the other units are similarly designed, considerable variety in appearance and flexibility in room arrangement are offered in planning a house. This flexibility makes it possible to meet (1) different site conditions, (2) different living needs of many families, and (3) public desire for individuality of exterior appearance.



COMPLETE exterior walls are built on jig tables by this prefabricator. Walls have 2 x 4 studding, 16 inches on center and cedar or redwood siding.



SMALL general purpose buildings are being fabricated by more and more dealers. They can be delivered by truck or semi-trailer directly to the customer's site.

PRE-ASSEMBLY IS SIMPLE

A dealer who entertains the idea of offering pre-assembled house sections is not letting himself in for a radical or expensive departure from his present services. It is quite simple, and if the service is merchandised the same as the others he offers, it can be of considerable advantage.

Rafter and wall-framing jigs are easy to set-up. Even a wide variation in one job to another can be provided for in a few hours at the most.

An adequately sized room is all that is necessary, and a large percentage of dealers have such space available at the present time. Jig tables are quickly and cheaply constructed, and a multi-use power saw is the primary tool necessary.

Thus, for a few hundred dollars at the most, a dealer can equip himself to do a pre-assembly job for his contractor customers. The shop can be as large or as small as is necessary to supply the area; and due to the small investment, be profitable in all cases. (See Sections covering Machinery and Equipment, also Power and Hand Tools.)

PREFABRICATION

The term prefabrication has been applied to structures that are largely fabricated in a factory. This is usually done by sub-assemblies, so that shipment of all components can be handled efficiently and compactly. These units are accurately made, and require only to be set in position and secured. As a result, the job-site assembly time is very short, and many prefabricated houses can be completely assembled ready for occupancy in a day's time or less.

Many prefabricated homes on the market today are not radically different in design from conventional construction. Others, however, are departing drastically from conventional, both in materials and methods, according to systems that have been developed by the manufacturers' research and engineering departments. Most of these however, have not been in actual service for a sufficient length of time to accurately determine their performance abilities.

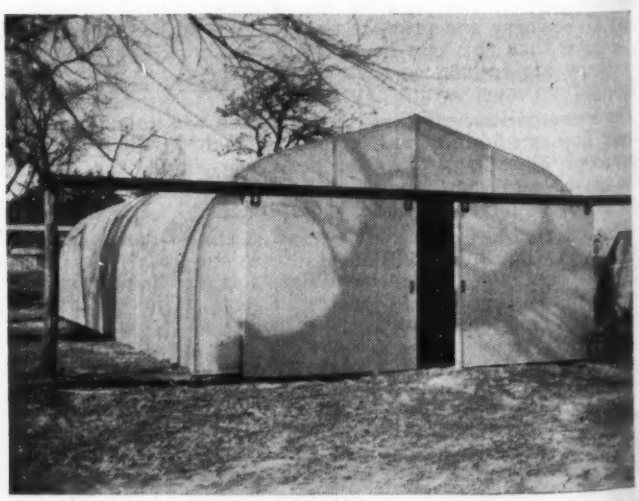
YARD FABRICATION FARM BUILDINGS

To many dealers in rural areas, pre-assembly and prefabrication practices have long been a part of their business. They found that there was an important market among their farmer customers for prefabricated small farm buildings such as brooder and hog houses, etc.

The assembly of these structures, the same as for pre-assembled house sections, requires little in the way of space and equipment, and can be carried out profitably on either a large or small scale.

Dealers who are considering entering this activity as a part of their operations may obtain excellent plans of all types of small farm buildings from their state agricultural college.

PRE-CUTTING and pre-assembly practices make possible the same efficiencies as prefabrication, but places the manufacture of house sub-assemblies with the building material dealer as a service to his contractor customers.



A TYPICAL farm machine shed has a continuous side and arched roof made of tempered hardboard. This sectionally-built structure, available in several widths and any desired length, can be rapidly bolted together on the site.

Section 23 Power and Hand Tools

Practically every building product handled by the retail lumber dealer is installed or applied with a tool. Therefore, it is a natural force of economics that the dealer who sells the materials has become one of the most important retail outlets for the tools with which they are fabricated or applied.

A dealer who may question the correlation between tools and building products may draw a close parallel between them and builder's hardware. Not so many years ago, the greatest volume of builder's hardware was sold by hardware retailers. Now the bulk of the national volume moves through the building products dealer, due to the simple fact that hardware is a necessary accessory for doors, windows, etc. that are essential construction items. Today, over 90% of the building material dealers sell the hardware for their millwork, and the customer has the advantage of complete service at one spot.

The same is true of tools. Tools are used to fashion and work the materials handled by a material dealer. A customer buying building products is naturally thinking about the tools and equipment needed to install them at the same time. Thus, the tie-in is very close.

THE MARKET FOR TOOLS

Tools that the building products' dealer may handle for resale are sold to three classes of customers: (1) The building tradesman, who earns his livelihood with them, (2) The home owner, who uses them to perform his own maintenance and repair work, and (3) The hobbyist, who derives pleasure from them.

Each is an important market. The craftsman must have a complete set of high quality tools to do his job. He appreciates them, is constantly looking for new or better ones, or replacing old ones.

The great trend toward home improvement work being done by the home owner himself, now called the "do-it-yourself" market, has caught the average home owner without the necessary tools. Volume to consumers for this purpose in recent years has been terrific. Even so, the great potential still lies ahead. More and more do-it-yourself work will be done in coming years. As yet, the average home lacks even the barest minimum of tools for basic home repair, not considering those needed for most improvement and modernization projects.

As for the hobby market—the woodworking hobby has grown, and is still growing, more rapidly than any other. A man engrossed in a hobby is looking for both quality and variety in the tools he buys for his home workshop.

TYPES OF TOOLS

Fundamentally, all types of tools may be classified as either power or hand tools, but when further divided by use, the definitions cannot be so general. More specifically, tools are grouped as follows:

Power Tools: Power tools are those which are driven by electric or other power, and may be either portable or stationary. Insofar as handling them for rental or resale, dealers are interested in bench, portable circular, and chain saws; stationary and portable drills; small band saws, shapers, and jointers; belt and portable sanders, etc.

Hand Tools: In the broad field of hand tools there are primarily woodworking and machinists, although each craft has specially adapted tools, i.e. sheet metal working, plumbing, electrical, etc.

The building material dealer has more interest in the woodworking variety, although certain others have wide usage in home repair and maintenance and should be included in every well-stocked tool department. These are soldering irons, wrenches, hack saws, files, etc.

Special Purpose Tools: In addition to the above, there are certain special purpose tools for which there is great demand. and which should be considered in organizing a complete tool department. These are lawn and garden tools, (See Section 22), post hole diggers, wire stretchers, paint sprays, axes, sledges, masonry drills, grinders, etc.

POWER TOOLS

Portable Power Tools: These tools cover a wide range of sizes and types, and are made for many uses, for both the professional craftsman and the home hobbyist. A brief description of the major types follows:

Saws: The portable type of power saw has gained general acceptance by carpenters and contractors because of its flexibility; and because it can accomplish substantial savings in time.

The professional types are made with 6" and 8" diameter blades, and are powered by motors of capacities ranging from 1/3 to 1 horsepower. While some are direct drive, most of the higher powered types are gear driven to provide ample power and correct blade speeds, particularly under severe cutting operations.

These portable saws have guides and guards which afford maximum safety, in addition to making possible accurate cutting of mitres, compound angles, etc.

CHART OF STANDARD TOOL OPERATIONS

WORK	CIRCULAR SAW	DRILL PRESS	BANDSAW	JOINTER	JIGSAW	WOOD LATHE
Straight Sawing	YES	NO	YES	NO	YES	NO
Drilling a Hole	NO	YES	NO	NO	NO	YES
Cutting a Curve	NO	NO	YES	NO	YES	NO
Cutting a Mortise	NO	YES	NO	NO	NO	NO
Cutting a Groove	YES	YES	NO	NO	NO	NO
Cutting a Tenon	YES	YES	YES	YES	NO	NO
Planing a Board	YES (With moulding head)	YES (with planer head)	NO	YES	NO	NO
Internal Cutting	NO	YES	NO	NO	YES	NO
Making a Turning	NO	NO	NO	NO	NO	YES
Shaping an Edge	YES	YES	NO	NO	NO	NO
Sanding an Edge	YES	YES	YES	NO	YES	YES
Sanding a Surface	NO	NO	NO	NO	NO	NO

Sizes of Home and Small Production Shop Tools

Tool	Basis for Name Size	Small	Medium	Large
Circular Saw	Diameter of saw blade	7"	8"	10"
Drill Press	Maximum diameter center-drilled circular work	11-12"	13-15"	15-18"
Wood Lathe	Diameter of turned faceplate work	8-9"	10"	12"
Jigsaw	Distance from blade to frame—(Throat capacity)	12-16"	16-18"	24"
Bandsaw	Distance from blade to frame—(Throat capacity)	10-12"	12-14"	14-18"
Jointer	Length of knives in cutter head	4"	4½"	6"
Disk Sander	Diameter of sanding disk	8-9"	10"	12"
Belt Sander	Width of belt	3"	4"	6"

Special blades are available which permit cutting of metal, tile, and concrete blocks.

Lighter models of lower power capacity are manufactured especially for the home craftsman and hobbyist. Many of these have specially designed accessories that convert the saw to a power drill, disc sander, buffer, etc.

Drills: Power drills are made in various sizes and capcities to perform all kinds of drilling service. The heaviest types have chuck capacities from ½" to ¾" and have powerful motors with single or double gear reduction systems. They will drill either wood or metal, and are designed entirely for heavy-duty, professional work.

The lightest types, on the other hand, are primarily hobby tools. Their versatility, however, makes them not only fascinating instruments, but the wide range of accessories that are made for them, permit almost unlimited use for work with wood, plastics, and soft metal.

Among these are circular saw blades, routing and carving bits, buffers, grinders, etc. Several of the manufacturers of these light hand power units also make a mounting stand which converts the unit into a stationary tool.

Sanders: These tools also are made for both the professional craftsman and the home hobbyist. The heavy-duty types are usually of the belt type, and range from a hand unit to the large drum types used for floor finishing.

The light models are either the disc or vibrator types, and due to their light weight and construction are limited in their usage. Many, however, are also equipped with polishing discs or wheels which give them widespread usage in the home. (See Tool Rental Section.)

Bench Power Tools: These are defined as those power tools that are stationary. They are either self contained on a stand of their own, or are rigidly mounted on a work bench or table.

Bench Saws: Of the bench saws there are two major types; the radial saw, and the circular bench saw. The former type has found wide usage among contractors and retail dealers because of its multi uses. On the job, the radial saw serves as a cut-off, rip, mitre, dado, etc. In fact, it performs every wood cutting job for any light construction project.

Retail dealers have found that the wide range of service offered by the radial type saw makes it an ideal piece of equipment for the yard. For complete details see Section 24, Machinery and Equipment.

For resale, however, the most popular type of saw with the home craftsman and the light manufacturing plant, is the circular bench saw. It is made in various sizes and capacities depending on the type of work. It is also made in two common types; the tilt table, and the tilt arbor. Both permit cutting of compound angles, in addition to mitre; and many of these saws have dado and shaper cutters that permit even wider cutting application.

The sizes most commonly found for home workshop use have blades of 7" or 8" in diameter. The maximum depth of cut for these is 2" and 2⅜". Arbor diameters are either ½" or ⅝", and a 1/3 or ½ horsepower motor is recomended.

A larger capacity saw has a 10" blade, and a ¾ horsepower motor is recommended to insure adequate power.

Drill Presses: Modern drill presses are highly versatile tools. Not only do they perform all drilling operations in wood, metal, and plastic; but with special attachments and modifications will also mortise, shape, carve, sand, and surface grind. Because of their versatility, a drill press is one of the necessary tools in any workship.

Like all other power tools, they are made in a wide range of sizes. The smaller types are more restricted in use, and if all types of work mentioned above is to be done, a larger, more substantial model is desirable.

As for specifications, cheaper models hold the spindle in bronze or other solid-type bearings. Better presses contain them in ball and roller bearings. Depth gages, tension controls, tilting tables, are features also incorporated in the more expensive types.

Planers: The light planers manufactured for the home workshop usually have blades either 4" or 6" wide. They will surface or edge all kinds of lumber. In addition, they will square-edge, rabbet, and bevel, which is made possible by tables and guides that tilt to any desired angle.

Shapers: Home workshop shapers are designed to cut mouldings or decorative edges, tongued and grooved edges, etc. Because many of the operations of the shaper can be accomplished with special attachments on a bench saw and drill press, however, it is not as essential to a complete shop as are some of the other tools.

Band and Jig Saws: Many fine band and jig saws are available to the small shop. The band saws are both the two and three wheel variety, with a capacity up to 6". Tilting tables, available with most models, permit the cutting of angles and bevels.

Jig saws for the home workshop are made with throats from 14" to 24" and thickness capacities up to 2 inches.

Lathes: Wood turning is becoming increasingly popular with the home craftsman. As a result, a full range of lathes are available on the market. Smaller types have a

TWO QUICK DEPTH ADJUSTMENTS--FRONT AND REAR--MEAN THAT HANDLE CAN BE KEPT AT COMFORTABLE WRIST POSITION EVEN IN VERY SHALLOW CUTS
FAST-OPERATING BEVEL ADJUSTMENT PERMITS BEVELS AT ANY ANGLE FROM 0° TO 45°; EASILY READ ON CALIBRATED QUADRANT
ELECTRO-SAW
BEVEL CUTS CAN BE MADE AT ANY DEPTH ADJUSTMENT
Black & Decker
ELECTRIC UTILITY TOOLS
PORTABLE ELECTRIC TOOLS
The Black & Decker Mfg. Co., Dept. H640, Towson 4, Md.

Talk about FAST ADJUSTMENT

Look what Black & Decker Saws give you!

PLUS

- **Abundant Power**
- **Easy Handling**
- **Maximum Safety**
- **Job Versatility**

PLUS

POPULAR PRICES!

- **6″ Heavy-Duty . . . $56.50**
- **6″ Deluxe Heavy-Duty . . . $76.50**
- **8″ Heavy-Duty . . . $92.50**

Sales features galore make Black & Decker Saws easier to sell. And their performance *in the wood* completes the selling job! For new profits right now, order Black & Decker Saws, Blades and handy new protractors from your Black & Decker Distributor.

HAND TOOL displays such as the above not only permit storage of a number of each tool, but places each before the close inspection of customers.

DEMONSTRATIONS of power and hand tools are sure interest getters. Dealers who use this promotion method substantially increase their tool sales.

MANUFACTURERS' point of sales displays are designed to make a visual sales presentation. This portable tool exhibit is an excellent example.

HOME TOOLS are displayed on this dealer's counter for convenient examination by potential customers. Furniture wax and automobile polish are featured as related sales products.

SANDING BLOCKS of solid rubber that are easy to handle make a profitable sales item. Handy packs of pre-cut sandpaper are available that fit prongs on the blocks.

swing of 7" and a capacity between centers of about 30". For the man who wishes to do heavier turnings, lathes with swings up to 12" and capacities of 36" between centers are available.

Other Stationary Power Tools: Also manufactured in sizes and capacities for the home craftsman are belt and disc sanders, grinders, buffers. For the serious workman, the sanding unit is essential to a complete shop, while a grinder and buffer is necessary for tool sharpening and maintenance.

Complete Workshop Units: Several tools are on the market today that combine into one unit all of the tools in the workshop. These have a circular saw, drill press, sander, lathe, grinder, and buffer all contained on one frame. They are highly desirable for the homeowner with limited space for his shop.

HAND TOOLS FOR HOME MAINTENANCE

The home owner is becoming more and more aware of the essential things that must be done to keep his home in good condition. Much of this work is now being done by the owner himself, and that means he must have the tools necessary to do the jobs.

For the benefit of the customer who isn't aware of the tools he should have on his premises at all times, the following list has been compiled. It has been found, after careful study by experts in home repair and maintenance, that there are 36 items that should be included in every home tool kit. These are:

Claw Hammer
Hatchet
Nail Set
Chisel (¼")
Chisel (⅜")
Cold Chisel
Small Screwdriver
Large Screwdriver
Jackknife
Three-Cornered File
Soldering Iron
Wire Cutting Pliers
Brace and Bits
Glass Cutter
Metal Shears
Framing Square
Folding Rule
Paint Brushes
Drawknife
Putty Knife
Mason's Trowel
Handsaw (Crosscut)
Hacksaw
Gimlet
Monkey Wrench
Stillson Wrench
Smoothing Plane
Galvanized Bucket
Small Wash Tub
Force Cup
Stepladder (6')
Oil Can
Oilstone
Flashlight
Carpenter's Pencil
Funnel

CARE OF TOOLS

To insure the proper and easy function of hand tools, they should be used correctly and stored properly. Of course the serious craftsman or hobbyist has a special kit or panelboard for his tools. But many persons do not know how tools should be cared for, or exactly what they should and should not be used for.

Here are some tips about tool care:

Screwdrivers should never be used as pliers or crowbars. Always match the screwdriver to the screw slot. Never try to drive a large screw with a small screwdriver.

Planes, drawknives, chisels, jackknives should be kept sharp. Dull cutting tools will not do a good job, and the chance of an injury is increased. When stored, the blades should be protected. Avoid nails or contact with metal.

Wrenches should never be used as hammers. Jaws should always be adjusted snugly against work to prevent scoring of jaws and work, and to avoid skinned knuckles.

Putty knife and trowels should be kept clean. They are not serviceable when putty, cement, or mortar are allowed to harden on them.

Hand saws should be kept sharp too. Nails should be avoided always. Keep the blade oiled to prevent rust. A good saw to begin with, properly cared for, will last for years.

The tip of a soldering iron should be clean and tinned, always ready for use.

CUT-OFF SAW

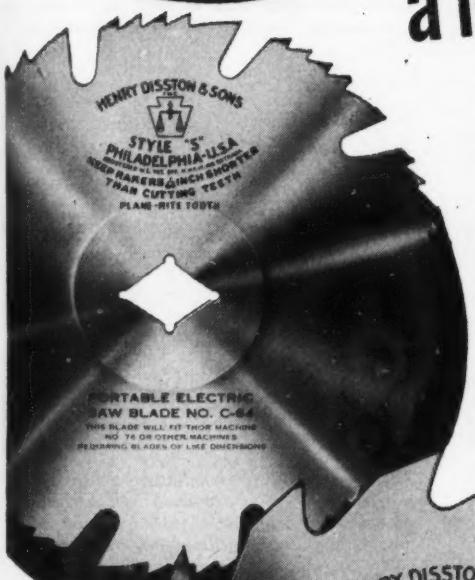
From DISSTON...

a new line of small circular saws

for all portable electric hand saws

From Disston—for 112 years America's leading producer of fine saws—comes this new, highly-saleable line of popular-priced, high quality, small circular saws. Made in all tooth types, with center holes to fit every make of portable electric hand saw used by building contractors and maintenance shops.

Each blade is individually packaged and has etched on it the name and model number of the machine it fits. You can't go wrong when you stock and sell the Disston line of replacement saw blades. It's a *leader* in value . . . a *leader* in performance . . . a *leader* in money-making opportunities for *you!*



PLANER SAW

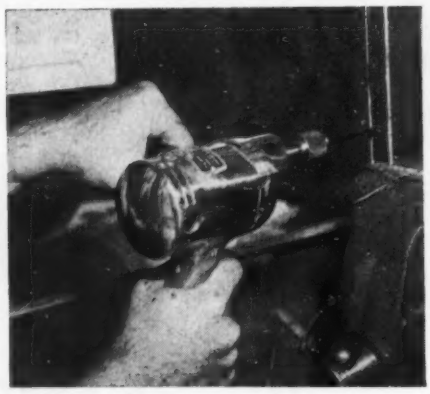
HERE'S NEW EFFICIENCY IN COMBINATION SAWS

New, different in design—based on advanced principles developed by Disston research—to meet the demand of portable electric saw manufacturers for a combination blade that would cut faster and cleaner . . . stay sharp longer . . . put less strain on small motors.

HENRY DISSTON & SONS, INC.
425 Tacony, Philadelphia 35, Pa., U. S. A.
Branches: Chicago, Seattle, Portland, Ore., Vancouver, B.C.; *Canadian Factory:* Toronto 3, Ont.; *Australian Factory:* Sydney, N.S.W.

FLOORING SAW

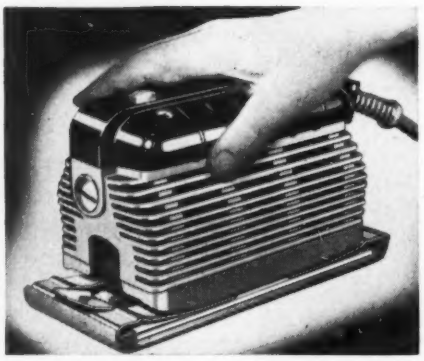
POWER HAND SAWS are in demand by carpenters and builders, as well as a vast number of home craftsmen and hobbyists.



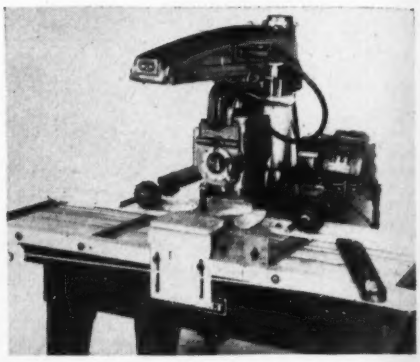
HAND POWER DRILLS are made in various sizes, and serve a number of purposes. The light models may be used as disk sanders, polishers, and carvers.

THIS LIGHTWEIGHT disc sander has certain production shop uses as well as having an important place in the home workshop.

TACKERS AND STAPLERS simplify the application of many building products, saves tedious hours, and insure a neater and more satisfactory job.



OSCILLATING SANDERS, because of their straight stroke, and even cut are necessary for perfect finishing. Both heavy duty and light models are available.



RADIAL or all purpose saws have become important tools in production shops, dealers' yards, with contractors and builders. Small models are within the range of a serious amateur craftsman or hobbyist.

Paint brushes should be cleaned immediately after use, and wrapped in folded paper to maintain its shape.

Brace and bits, like other cutting tools should be kept sharp and free from rust.

Pliers should never be used as a hammer. The cutting edge should be kept sharp.

A nailset should never be used as a punch.

The honing surfaces of an oilstone should be cleaned occasionally with a brush dipped in kerosene. Care should always be taken not to mar the surfaces.

The constant enemy to the life and efficiency of any metal tool is rust, and rusty tools are never as serviceable as bright, clean ones. Keep all metal surfaces covered with a thin coating of fine oil or special rust preventative.

This is particularly true if tools are stored in basements or other areas where it may be damp.

SANDPAPER

Sandpaper is also a tool . . . in fact, a tool that gives today's craftsmen and carpenters an abrasive material of the highest quality for every conceivable sanding job.

This modern sandpaper—coated with industrial-quality aluminum oxide mineral grains—is on the market in a variety of grits and pre-cut specialty and sheet sizes. In addition it offers the user a sandpaper with long life and high cutting speed, plus a paper that can be used for jobs ranging from rough stock removal on through the final bare wood finishing.

For doing such jobs the aluminum oxide sandpaper comes either as pre-cut and packaged sheets, discs, belts, bands, and refill rolls, or in 9- by 11-inch sheets. All are open coated, and feature a simplified grit classification—"very fine" (220), "fine" (150), "medium" (80), "coarse" (50), and "very coarse" (36). The pre-cut and packaged line is especially designed for use on home power sanding equipment and rubber sanding blocks.

A waterproof sandpaper, which—besides being relatively new on the market—complements the line of aluminum oxide papers is designed for wet sanding by hand of the between and final finish coats.

This paper is coated with silicon carbide mineral grains in grits ranging from "super fine" (400) to "extra fine" (280) to "very fine" (220). It is made in 9- by 11-inch sheets.

The use of waterproof sandpaper—even on the finest grades of wood—makes it possible for any woodworker to bring out satin-smooth finishes of top-professional quality.

TOOL RENTAL DEPARTMENT

Many dealers have entered the tool rental business, with most satisfactory results. Such equipment as floor sanders, paint sprays, and various other power tools make excellent rental items, and the profit from the service can be quite gratifying.

The market is with home owners, men who are amateur mechanics and like to do odd painting, redecorating and general maintenance work around their home. In addition, many carpenters and painters do not own their own equipment, preferring to rent it as the occasion arises.

Rental of Floor Sanding Machines:

Dealers report that their relatively small investment of a few hundred dollars in sanding machines and accessories is often returned in less than a year. On a national basis, overall income derived from this service breaks down as follows: 45% of income from machine rentals, 25% of income from sandpaper sales, and 30% of income from sundry items, including finishes, tools (brushes,

Tool Bar

THE WORLD'S GREATEST TOOL SELLING INSTRUMENT

OUR DESIGN PATENT NO. 165,255

Photo by Ewing Galloway

* ON EVERY WORTH Tool
REGARDLESS OF THE BRAND

(Symbol Trade-mark registered U. S. Pat. Off.)

ASK OUR WHOLESALE DISTRIBUTORS

The Peck, Stow & Wilcox Company SINCE 1785 Southington, Connecticut, U.S.A.

THE HARDWARE RETAILERS' PROFIT-MAKING TOOL SOURCE

1PX32

Rental of floor sanding and polishing machines has been an established part of many dealer's business for many years. Thus the home owner may refinish his own floors, be sure of a better job, at very low cost.

A tool rental department, which include all types of power tools from chain saws to cement mixers, are a service now being offered by many dealers.

scrapers, cloths, tack-rags, mops, waxers, polishers, etc.) and miscellaneous items such as linseed oil, alcohol, turpentine, thinners and dryers.

Types of Floor Sanders

There is a wide selection of floor sanding machines—over 40 different well-known models. Drum-type sanders range from 6 to 9 inches wide and weigh from 35 to 175 pounds. These are built to sand entire floors, and in some cases are provided with a narrow auxiliary edging drum to sand right up to the baseboards. Some machines are light enough to be operated by the merest novice; some heavy enough to be in demand by professional floor sanders.

Then, there are at least six popular models of light, portable disc sanders and belt sanders for edging, for sanding stair treads, for getting into closets, behind toilets, under radiators and into other places difficult to reach with the larger units.

Offer Complete Service—Always supply the customer with a suitable instruction sheet or folder. These can be obtained from the manufacturer of the floor sanding equipment. Instruct the customer on how to apply and change sandpaper, stressing the fact that the paper must be tight to the drum or breakage will result.

PROMOTING TOOL SALES

The most successful way yet developed to sell tools to the customer is by the package. For example, a complete home workshop may consist of a bench, circular saw, drill press, sander, grinder, and perhaps a small shaper or jointer, together with the proper size motor to drive the equipment.

It is an easy matter to illustrate and explain what would constitute a minimum workshop, a fairly complete one, and an entirely complete unit, breaking down the cost of each into monthly payment amounts. Such advertising reaches men of all means and overcomes the resistance to price immediately.

A similar method has been worked out for hand tools. These are assembled into kits of various sizes and costs, and advertised as units rather than individual pieces. Several tool manufacturers supply the complete kits including the special box that contains the tools.

Most manufacturers have developed effective advertising and point of sale displays that help immeasurably to sell their products. It is always advisable to review this material carefully, and use it wherever possible in the overall promotional program.

Certain items mentioned in this section are definitely seasonal. Special advertising and point of sale emphasis should be placed on these during the peak periods of demand.

SELECTION OF INVENTORY

For the dealer who wishes to know the items of inventory that fall into this category, the following list has been compiled.

- Adzes
- Automatic tackers
- Axes
- Blow torches
- Calipers
- Carpenters chalk
- Carpenters pencils
- Chains
- Chisels
- Crayons
- Crowbars
- Files
  - Cutters
  - Putty knives
- Hammers
  - Bricklayers
  - Claw
  - Heavy service
  - Leather handled
  - Tack
- Handles
  - Axle
  - Hammer
  - Hatchet
  - Pick
- Hand drills
  - Drills sets
- Hatchets
- Jacks
- Levels
- Melting pots
- Metal shears
- Micrometers
- Miter Boxes
  - With saws
- Monkey wrenches
- Nail pullers
- Nail sets
- Planes
  - Block
  - Rabbet
  - Jack
- Pliers
- Wrenches
- Plasters tools-
- Saws
  - Band
  - Buck
  - Buzz
  - Compass
  - Coping
  - Cordwood
  - Cross-cut
  - Cut-off
  - Dado
  - Hack
  - Hand
  - Hollow-ground
  - Jig
  - Keyhole
  - Rip
  - Two-man
  - Woodsmans
- Saw horses
- Saw tools
  - Gauge
  - Jointer
  - Vise
- Scoops
- Scrapers
- Screw drivers
  - Automatic
  - Cabinet
  - Heavy duty
  - Pistol grip
  - Screen holding
  - Spiral ratchet
  - Stub
- Shovels
- Solder
- Squares
- Spades
- Steel tape
- Steel wool
- Stones
- Tool boxes
- Trowels
- Turnbuckle
- Vises
- Wheelbarrows
- Wire ropes

Section 24 Woodworking Equipment

The extent that various dealers engage in the fabrication of lumber as a part of their operations varies considerably; but no matter what type and kind of woodworking service is provided, there is a suitable, highly efficient piece of equipment available. The major types are defined as follows:

Scroll Bandsaws: These saws are available in all sizes depending on the requirements. The most important consideration in determining the suitable size is the throat room necessary to perform the cutting operations to be done. Throat room is governed by the diameter of the wheel.

Scroll bandsaws are highly versatile for certain sawing operations, even to the amount of resawing that the dealer is often required to do. They are also manufactured in sizes sufficiently small to be usable in the home workshop. Thus, they make not only a piece of equipment that the dealer may install in his own shop but an item for resale as well.

Bench Saws: The applications of this type of saw are well known to most dealers. They are primarily suited for ripping, longitudinal grooving and routing of short pieces, cutting to length, etc. Many types are made with a tilt top to permit accurate angle cuts.

Bench saws may be hand or automatically fed according to the volume of work required of it. Blade sizes range from 6 inches up, but the smaller sizes are best suited to light work. They make an excellent home workshop item.

Cut-Off Saws: Cut-off saws are mounted on a long bench for the speedy cross-cutting of lumber of all lengths. Most of these are of the swing type and are adjustable to insure a perfect right-angle cut-off. In all shops where considerable cut-off work is done, a saw of this type is an efficient piece of equipment.

Universal, All-Purpose Saws: In recent years a number of these highly serviceable units have been introduced and have widened materially the latitude of all cutting operations.

These saws are semi-portable in that the saw-table unit may be moved with little difficulty. They are adjustable to perform ripping and cutting operations, may be set to cut at any desired angle, and can be quickly and easily fitted with blades and cutters to serve as a dado machine and shaper.

Their usefulness is almost limitless in all woodworking shops, but to the dealer whose shop requirements are comparatively small, a unit of this type is particularly desirable. In one compact unit he has practically all of the working facilities of a large plant.

The increasing popularity of pre-cutting methods of construction has focused attention on this kind of equipment since it performs all the necessary operations with a minimum expenditure for machinery.

Electric Handsaws: These light, versatile saws have many applications in a yard, and have become extremely popular with craftsmen as well. Many dealers have several of these units in the lumber sheds so that special cutting to meet customer requirements may be done quickly and easily.

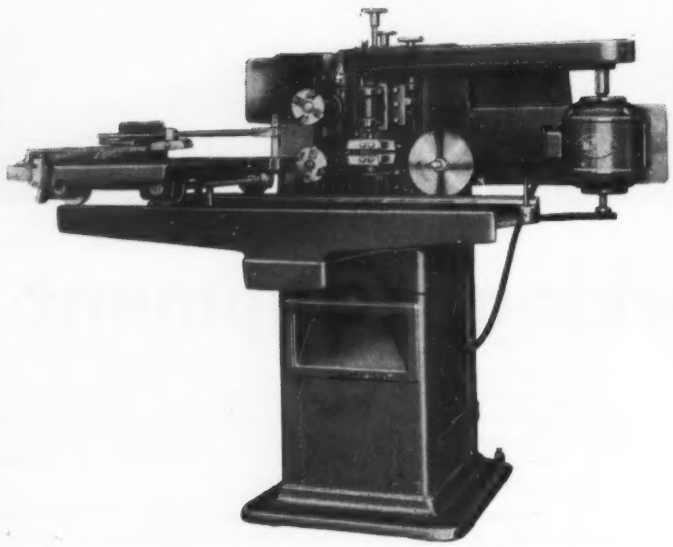
They are excellent for cutting plywood, board products, etc., as well as lumber, and the savings in time and effort they afford will make them pay for themselves in a short period. They are also good items for resale to craftsmen and contractors, as they have equally wide utility at the job site.

Jointers

In many instances it is necessary to joint or dress edges. Therefore, it is wise to have a good handfeed jointer. Where there is much long material, requiring the edges to be dressed or jointed, a large jointer with long tables is best. Many of the newer, smaller jointers are highly versatile. Sometimes jointing of edges is done at a shaper with a special adjustable offset fence. With such a fence mounted, the shaper temporarily becomes an edge jointer. Where material is to be made S4S to size in small lots, the usual procedure is to joint one edge, then rip the stock about ⅛-inch overwidth by turning the jointed edge against the ripping fence. The remaining (just ripped) edge can be run over the jointer, taking off ⅛-inch to dress the remaining edge and to reduce it to the actual width required. Any firm having enough stock to run S4S can save considerable time by using a small sticker.

Edges can be beveled to any desired degree between square and 45 degrees removed on practically any jointer by tilting the jointer fence. If edge-beveling is to be done at the shaper, however, knives must be bevel-ground for the purpose or a special form must be built to hold the material tilted as it is run over the table. Bevels

TWO EFFICIENT LOW-
LIGHTEN THE BURDEN IN



POWERMATIC NO. 2A SINGLE END TENONER

Medium heavy single end tenoner. Completely flexible on special runs for the large manufacturer and for all tenon operations in smaller woodworking shops.

COMPARE CONSTRUCTION – OPERATION – COSTS

1. Tenon Heads: Round Heads equipped with high speed steel knives. Spindles are 1 3/16" Dia. mounted in sealed ball bearings. Powered through "V" belts by a 2 H.P. 36—RPM motor mounted in base. Both Tenon Heads have vertical adjustment. Top Tenon Heads have vertical adjustment for cutting tenons having shoulders unequal distance from end of material. BOTH HEADS CAN BE RAISED OR LOWERED SIMULTANEOUSLY FOR INSTANT POSITIONING OF TENONS OF SAME THICKNESS WHEN CHANGING TO MATERIAL OF DIFFERENT THICKNESS. Heads are 4¼" Diam.
2. Cope Heads: The cope heads are equipped with two knives and powered through "V" belts by a 1 H.P. 3600 RPM motor. (Copes and motor are optional equipment). Spindles are also mounted in sealed ball bearings. ENDS OF SPINDLES ARE THREADED FOR CUTTING CHECK RAIL SLOTS UP TO 2¼" OR FOR EQUIPPING WITH VARIOUS PATTERN GROUND CUTTERS. Both heads have individual adjustment vertically and horizontally.
3. Cutoff Saws: 7" Diameter, Driven 5000 RPM by individual "V" belt from Tenon Head Drive motor. Saw shaft equipped with sealed ball bearings.
4. Frame: Constructed of heavy cast iron base and top with heavy reinforced welded steel sides.
5. Guards: Fully guarded over all moving parts with hinged and easily detached guards.
6. Carriage: Mounted on double rollers allowing for speed and ease in operation. Securely held on the ways and insures positive alignment with cutters.
7. Capacity: TENON and COPE HEADS OPEN 3". Maximum Tenon —3" thick, 6" long, 13" wide.
8. Controls: BOTH MOTORS HAVE SEPARATE CONTROLS allowing for individual use of Tenon or Cope heads. Motors and switches are standard equipment.
9. Weight: . . . 850 lbs., uncrated and fully equipped with motors.
10. Styles: Furnished Complete with motors, Tenon Heads, Copes and Cutoff Saw as one unit, or Furnished less Copes and motor.

Catalog leaflets sent on request

Write today for quotations and delivery date. We will gladly arrange for a personal inspection and demonstration.

POWERMATIC also manufactures

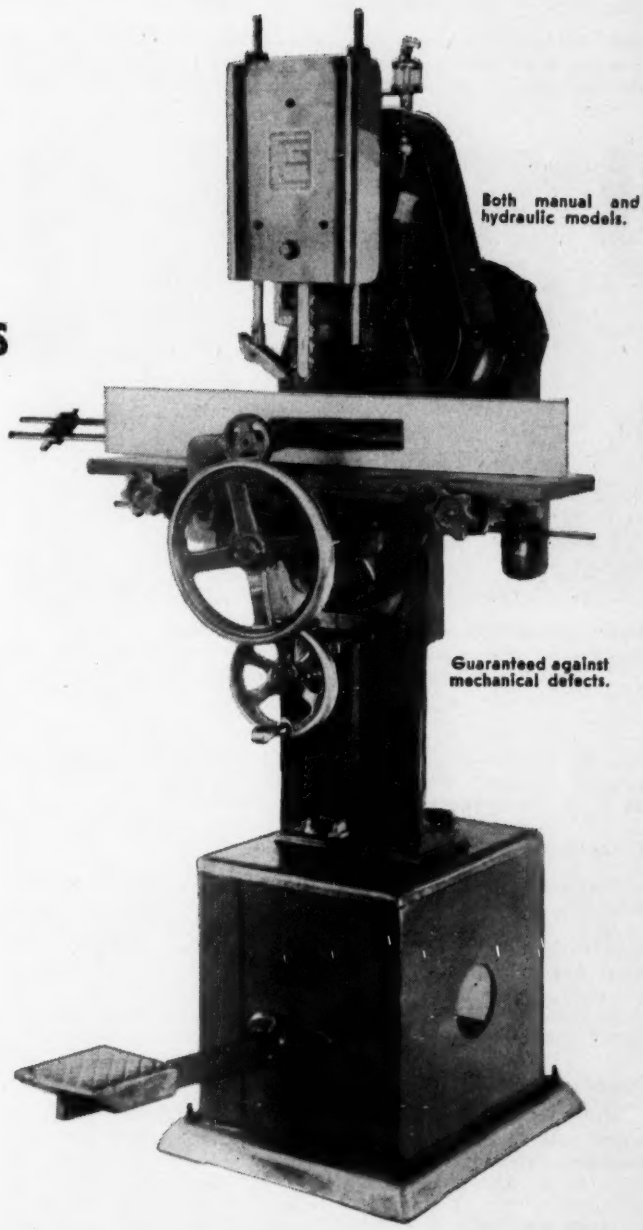
E-16" Planer

E-16" Knife Grinder and Jointer

Write for catalog leaflets

COST MACHINES TO EVERY WOODWORKING PLANT

POWERMATIC NO. 2A CHAIN MORTISER



Both manual and hydraulic models.

Guaranteed against mechanical defects.

PERFORMS ALL MORTISING JOBS

- Specially designed for all types of light and medium mortising work.
- Rugged construction assures production at minimum cost.
- Standard equipment includes compound table with adjustable back rest, facing adjustment which tilts to 45 degrees for making angle mortises and adjustable stops for control-length of mortise.
- Power-plus for smooth production. Direct feed by foot pressure. Depth controlled by stops on main column or hand wheel and bevel gears for adjusting to widths of stock.

Manufactured by

POWERMATIC MACHINE CO.

McMinnville, Tennessee

POWERMATIC MACHINE CO.
McMinnville, Tenn.

Please send me descriptive folder about Powermatic No. 24 Single End Tenoner and Powermatic No. 2A Chain Mortiser.

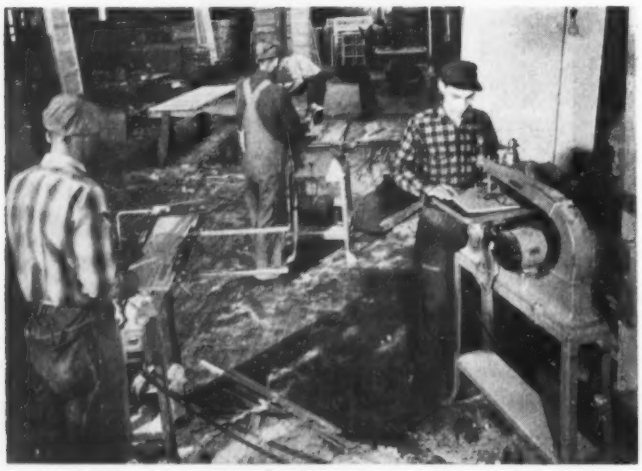
Name .....

Address .....

City .....State.....

THE RADIAL SAW performs many jobs in the woodworking shop. In addition to all sawing operations, accessories that permit dadoing, plowing, carving, etc. are made for quick installation on the arbor.

FOR HEAVY WORK, high production shops, special machines for each operation are desirable. This heavy-duty planer, for example, can handle a large volume of work of whatever specification may be required in the shop.



LIGHT PRODUCTION machinery is particularly designed for the shop that handles cabinet work. With five machines, practically every cutting and fabricating operation can be accomplished.

PORTABLE POWER TOOLS save cutting and handling time in the shop, yard, or on the construction job. Many dealers have several of these handy saws around their sheds to take care of orders for odd widths and lengths.

can be ripped with universal-type saws (which are arranged for both swivelling and tilting the saw) as well as with the modern variety saw bench.

Planers

Planing operations generally involve accurate thicknessing. With a planer it is possible to reduce lumber to any desired lesser thickness. Small planers are available to handle material up to 4x12 inches. (There is at least one planer obtainable today that is of still smaller capacity, handling material to a maximum width of 10 inches and a maximum thickness of 2¾ inches.) A few yards may require a larger planer.

Sanders

Most sanding required is on flat surfaces. A hand block belt sander is good for this and for other general-purpose sanding. Small portable belt sanders may be used to advantage. Plywood, wide dimension stock, and different kinds of trim are obtainable already sanded so sanding problems are usually minor ones.

Molders

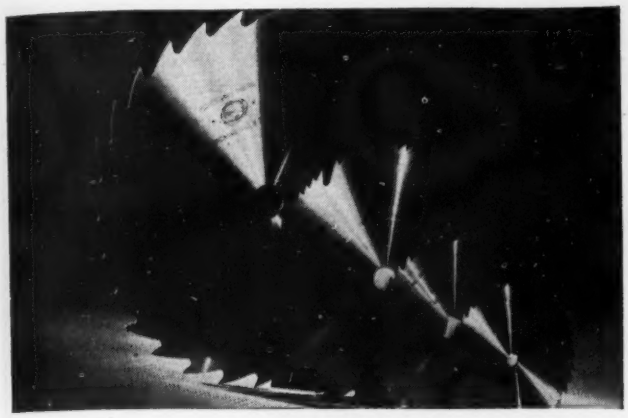
Most of the moldings needed are obtainable on the market, but there are different ways to produce special moldings. When it is necessary to produce much S4S stock to uniform size, it is well to have a smaller sticker or molder at hand. A 4 inch machine is usually adequate and it can also be used for running various kinds of moldings and other stock of odd-shaped, cross-section. This machine is extremely accurate. Moldings also can be made at the shaper. Special molding heads for given patterns may be applied either to the shaper spindle, to the spindle of a handfeed rip or variety saw, or they may be used on the spindle of one of the highly universal saws. Special cutterheads to which differently-ground knives may be applied as required are also available.

Equipment for Miscellaneous Operations

Small rabbets can readily and safely be cut at the shaper. Large square rabbets (if it is desired to knife-machine them for smoothness) can be more safely made at the jointer. Rabbets that will not show after the material is installed may be made by removing the material with two saw cuts. This is desirable in the case of larger rabbets, for a strip of material is then saved out of the rabbet. Beveled rabbets in window stools can be machined readily by removing the material with two saw cuts.

Dadoing can be performed with a universal saw, a straightline cutoff saw, or with a roller table saw. The roller table saw has a certain advantage in dadoing wide stock that may not be perfectly straight, as when making built-in cabinet ends. With such a saw there is no danger of cutting too deep with the dado head and ruining the work. Instead, the dado cuts may be too shallow in places. It is a simple matter to later clean them out to full and uniform depth with a standard dado plane.

Grooving and plowing in the direction of the grain can be accomplished with the handfeed ripsaw by mounting the proper dado cutters on the saw arbor and running the material against the fence. It can also be done to advantage at the shaper. Any of the versatile variety saw benches may be used for this purpose and the same work can be done with one of the universal cutoff saws.



BUCKEYE SAWS

. . . TO YOUR SPECIFICATIONS

Buckeye Circular Saws are made of highest grade American steel . . . from 6" in diameter on up to 34". Cross cut saws . . . combination saws . . . rip saws . . . there's a complete line to meet all your requirements. Write today for Catalog.

Manufacturers of

Saws for Wood, Metal, Cork, Bakelite, Fiber, Bone, Ivory, Paper. Band and Circular Knives for Paper, Cloth, Cork, Candy, Rubber.

DELIVERY IN 30 DAYS OR LESS

THE BUCKEYE SAW CO.
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THE LUMBERMEN'S ACTUARY. By John W. Barry. The latest edition has 504 pages and shows at a glance the value of any number of feet between 2 feet and 29,000 feet at any price between $6 and $150 a thousand. It also shows the board feet in any number of pieces from 1 to 2,000 pieces of any thickness, and for any width from 2 to 24 inches. It contains tables for figuring the cost of any number of thousands of lath or shingles from $4 to $15.75 a thousand, and for figuring moldings, lumber bills, car freights, car invoices, yard inventories, odd sizes, wages, etc. In addition it has a table of measurements on wall board in 32 and 48-inch widths, a table showing the number of square feet in ceilings and walls of rooms of various sizes, tables for estimating the quantities of various items of lumber, shingles, etc., required to cover given surfaces, a table of areas of openings, weights of lumber, etc. Tables of nails, kinds and quantities required for various work, and other tables of information are included. **Price $10.00.**

Terms postpaid, please include check with order and mail to:

AMERICAN LUMBERMAN, Inc.

139 No. Clark Street, Chicago 2, Illinois

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Bob Feller

(Ace Pitcher Cleveland Indians)

"Puts out the Fire" with INDIAN FIRE PUMPS

Banner Compressed Air Sprayer

Electric seam welded tank. Streamlined dome top. (Open or funnel type.) Highly popular, fast seller.

STREAMLINED BLIZZARD
COPPER CONTINUOUS SPRAYER

World's most beautiful sprayer. Pint, Quart. Solid copper tank. Pump barrel highly polished brass. Handsome design.

Send for Sprayer Catalog

Bob Feller guards his rural estate with **INDIAN FIRE PUMPS** since he knows these portable, clear water extinguishers will take care of *any* emergency.

We are proud to have this famous Indian as a user of **INDIAN FIRE PUMPS.** How is *your* supply? Be prepared for the fire season. Order now.

Have you ordered INDIAN FIRE PUMPS For Civil Defense? Be Prepared! Be sure to visit the Federal Civil Defense *"Alert America"* Exhibit when it comes to your locality.

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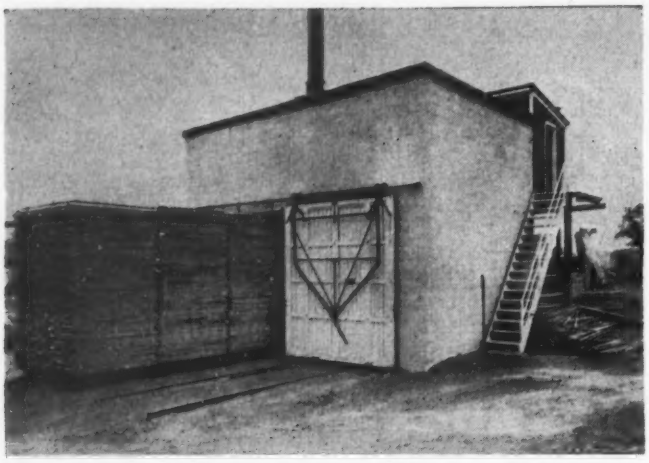
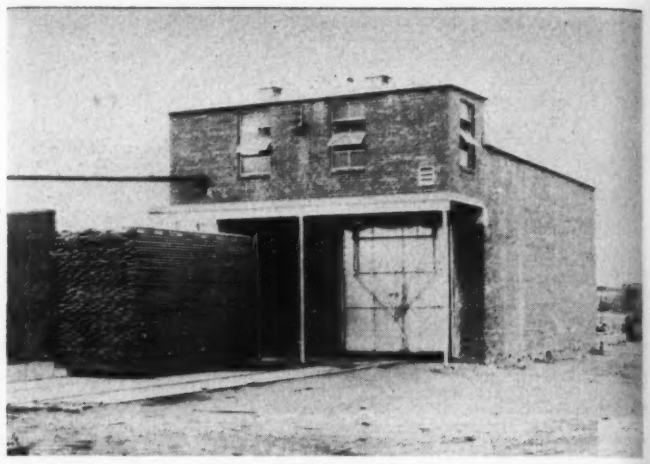




THESE MODERN, efficient, small capacity kilns are typical examples of the type operated by the many dealers who dry all or part of their inventory after it is delivered from the mill. Some with large shops, use the kiln to carefully dry their mill stock.

Mitering usually refers to cutting the ends of pieces at 45 degrees so they will join up properly to form a square corner without showing any end grain. The pieces can be joined at any angle in like manner. Some mitering can be done on roller table saws and much of it is performed on variety saw benches. Practically any type of miter, or combined miter and bevel, can be cut with universal saws. Such machines are particularly useful for making the compound cuts required on jack rafters and like work.

The best machine for the retail lumber dealer to use for mortising is generally a simple hollow chisel unit of foot-powered type. Tenoning can be done either at the shaper or on a universal saw. However, it is much better to have a single-end tenoner if any appreciable amount of this is done. There is a bench tenoner of single-end type suitable for smaller amounts of light work.

Dust Control

Dust control is of maximum importance in woodworking operations. Dust explosions in woodworking plants rank second only to grain plant explosions, according to the National Fire Protection Association.

A good dust control arrangement covers the following:

1. One or more main exhaust fans with a main and branch exhaust ducts connected to individual hoods at machines.
2. Arrangements at floor level should provide for the removal of such material as may fall to the floor around the machines and be swept up.
3. Dust should be discharged into a collector or separator of adequate capacity.
4. Wood scrap should be collected and transferred to a central storage area.

Three types of dust controls systems are widely used in woodworking operations: (1) mechanical collector systems utilizing cloth bags, (2) large centrifugal depositors, and (3) a group of small centrifugal collectors. These three types may be used alone or in combination, depending upon the scope of the operation.

Good housekeeping is of prime importance in reducing both dust explosions and fire hazards. The plant should be cleaned thoroughly at regular intervals to prevent accumulation of any considerable amounts of finely divided wood dust. Hard-to-reach horizontal surfaces that act as particle traps should be eliminated or reduced as much as possible. If such places exist, they should be so pitched or beveled that dust will not collect. Collect nails and other metallic scrap in separate containers. It takes only a spark to start an explosion.

Fire Control

Fire alarm systems reduce fire loss by notifying fire control departments and building occupants that a blaze has started. Several systems are available from automatic sprinklers to watchman control systems.

Fire control equipment such as fire shutters and fire doors help prevent the spread of fire. Doors may be made automatic by the use of fusible links which are held together by solder that melts at a predetermined temperature and releases the door. Other self-closing methods are used.

Fire extinguishers and fire extinguishing systems are of paramount importance. Fire extinguishers are designated by ratings which are determined by the fire conditions that they will control. It is essential that extinguishers rated for typical lumber yard and woodworking shop hazards be used.

Safety Equipment

Other measures that should be considered for safety include first aid equipment spotted strategically throughout the yard, goggles for men using woodworking machinery, heavy duty gloves, work shoes with safety caps, and respiratory equipment for use in sanding and other operations.

DRY KILNS

Forced Circulation Kilns: Modern forced circulation kilns are large, well-insulated buildings, in which ideal drying weather can be manufactured the year round. Automatic controlling and recording instruments place the drying on a more scientific basis—these special dry kiln instruments provide automatic control of temperature and humidity at each end of the kiln independently, and thermostatically control roof ventilators.

Most of the dry kilns built today are equipped with large diameter, multi-blade fans operated by electric motor. Pre-conditioned air of desired temperature and humidity is directed through the loads until the lumber is seasoned to proper moisture content.

A more efficient heating system for the modern kiln incorporates the use of two-inch "fin-pipe," which has eight times the radiating efficiency of one-inch dry kiln pipe. This type of heating system also offers less resistance to air flow, and requires fewer coils and fittings.

If the kiln operates continuously with a green load being put in and a dry load taken out of the opposite end simultaneously, it is known as a "progressive" type kiln. If the entire load of lumber is removed, and a new load put in, it is called a "compartment" type kiln.

Direct-Heated Kilns: Small and medium-sized plants who wish to avoid the expense of installing a boiler and employing a "round-the-clock" fireman, are installing direct-heated kilns using natural gas or oil for fuel. This type of kiln is not as completely automatic as a steam-heated kiln, since steam is not available for supplying steam spray for humidity.

Plants requiring a completely automatic kiln can install a steam generator, operating on natural gas or low cost fuel oil, and heat the kiln with low pressure steam. The generator supplies kiln with steam for humidity when needed, and does not require the services of a fireman.

Unit Package Kilns: Many small plants and retail yards equipped with fork lift trucks are installing small unit package kilns. Where space is not available for dry kiln truck and transfer tracks, the kiln building is designed so lift trucks can carry unit packages of lumber directly into the kiln.

Unit packages may also be stacked on roller bearing dry kiln trucks, and moved in and out of the kiln in the same way as regular kiln loads.

Section 25 Materials Handling & Trucks

MECHANICAL HANDLING

Mechanical handling of building products is one of the livest subjects being discussed in dealer circles today. Equipment and methods to gear the yard to a mechanized handling operation are receiving greater attention at present than at any time in the past.

There are two main factors largely accounting for this high level of interest. (1) The rapid advances in labor costs have put obsolete manual handling methods at a premium. (2) In the past several years an entirely new industry has been developed—the mechanical handling equipment industry. Tested equipment handling ideas and improvements have poured out of engineering and design laboratories in a volume that exceeds almost any other field of mechanical engineering.

Dealers have been quick to respond. The majority of new yards being built today are laid out for mechanized material handling. Prime consideration is given to this method of lower operating costs where yards are now being remodeled. Present handling methods in use at existing yards are receiving close scrutiny by progressive dealers.

BEGIN WITH A SURVEY

In almost every case there is today more than one type of mechanical equipment that can be used to perform any given handling operation. The lumber and building products merchant must carefully weigh all types and select those that do the job best when considered from such standpoints as the initial investment, operating and maintenance cost and physical yard changes (if any) required to accommodate the equipment. In addition to paying for itself out of savings made by replacing the old handling method, the equipment also must be selected in light of its ease of operation and its safety to both the operator and others.

Valuable assistance can be secured from the manufacturers of mechanical handling equipment. Material handling engineers from such manufacturers will survey the dealer's yard operation to determine whether or not it can be benefited by the use of mechanical handling equipment. This service, offered without obligation by such engineers, makes it unnecessary for those who are not trained in the science of materials handling to experiment on a hit or miss basis that can often result in added expense and disappointment.

YARD DESIGN IMPORTANT

The open area warehouse, therefore, is taking the place of the old lumber shed and narrow, low warehouse buildings in yards that are adapting their facilities for mechanical handling. Many modern yards are now housed completely in one warehouse building.

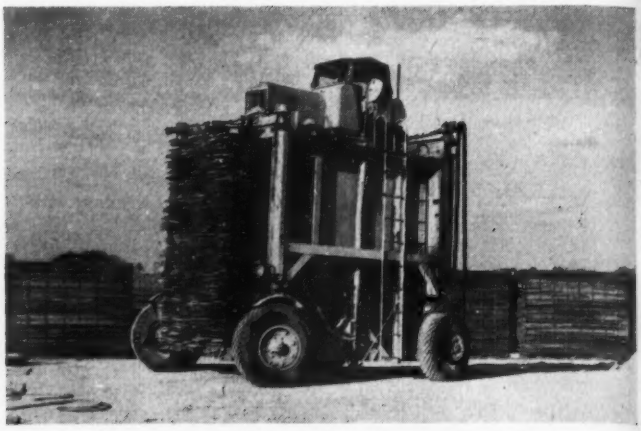
Open yard storage, of course, is ideal for mechanical equipment, without modification of buildings; but for the complete job. all structures, traffic lanes, and other yard facilities should be adapted to take advantage of the full time and labor saving features of the machinery.

As a result of this new equipment, ideas of yard buildings and arrangement are changing. The inflexibility of old type sheds and storage buildings is giving way to the fluid layout, where space is open and unrestricted by bins, partitions, and other permanent fixtures.

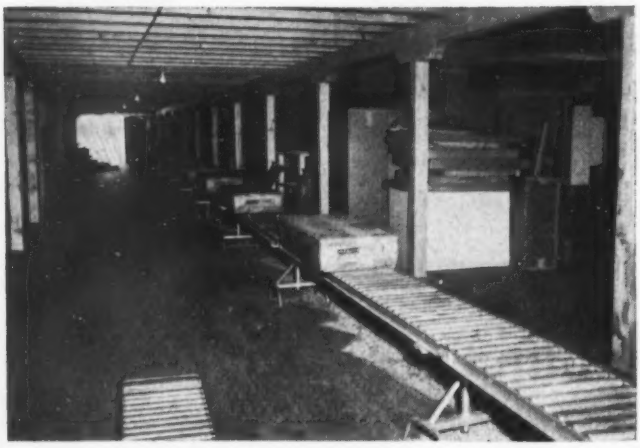
Mechanical equipment works best when it is used to transfer material into inventory in one operation, and out of inventory in another. Any other handling process detracts from the total efficiency that the equipment affords.

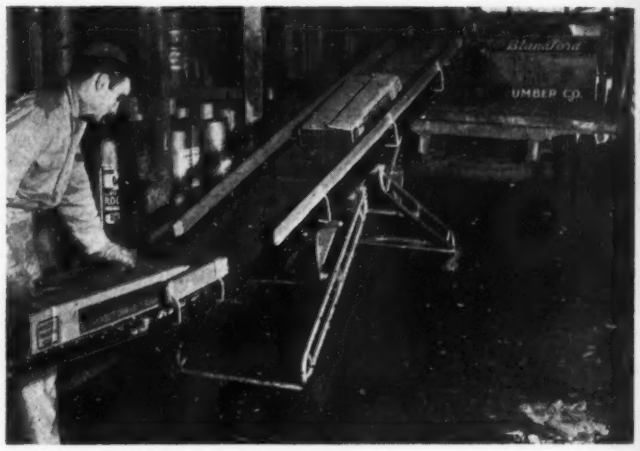
CONVEYORS CUT COSTS

Conveyors are of two types, power and gravity. The former type permits the mechanical raising and lowering of the materials it carries, in addition to moving it laterally. Conveyors are also made wth buckets and scoops, as well as belts and rollers, for the moving and loading of loose materials such as coal, sand, gravel, etc.



HANDLING COSTS of practically all lumber and building products can be substantially reduced in the yard through the efficient use of mechanized equipment. The fork lift truck at the left, and the straddle truck at the right are popular types of handling equipment.





CONVEYOR SYSTEMS, both gravity and power, have found widespread acceptance in the retail lumber and building products yard, for unloading and moving into storage, and for loading company delivery trucks.

Gravity type conveyors must be sloped from the point of loading to the point of delivery.

The various types of equipment available to the retail building products and lumber dealer are manufactured in a full range of sizes and capacities. Each, by design and specification, is engineered to operate under a range of conditions. Thus, their latitude of service can be adapted to the moving and handling requirements of all dealers, no matter what their size or volume may be.

TYPES OF MECHANICAL HANDLING EQUIPMENT

Building materials handling equipment falls into two general classifications: prime movers, and conveyors. Of the former type, the fork lift and the straddle trucks are the most familiar. Both perform a distinct function.

Straddle trucks are conveyances that can lift and transport large stacks of lumber. In many cases dealers use them not only in the yard, but also as delivering vehicles to the job site.

Fork lift trucks, as their name implies, are vehicles that permit the transport of lumber and other building products both laterally and vertically. Thus, their efficiencies cover the problem of efficient storage of materials as well as that of efficient transport.

Also included in the classification of prime movers are many other types of hand trucks, carts, and dollies. Some of these are power actuated; most however, utilize man power to move them.

STRAPPING NOW ESSENTIAL

Considerable research has been conducted in recent years on improving packaging, shipping and storing of all types of merchandise. Building materials have received considerable study in this regard, with the result that new efficiencies have been developed to cut handling costs and reduce spoilage of many types of construction materials.

Steel Strapping

Steel strapping is not new. It has been employed by many industries for a number of years. It is, however, comparatively new to the building products field, but its applications are being widened rapidly and steadily.

With lumber, steel strapping was first employed at the mills to package it for shipment. Now, in addition, many yards are using strapping to prevent piles from curling in the open, and to prepare items for local delivery.

The rapid trend toward mechanical handling of building products, and the palletizing of the items for the most effective use of mechanical equipment, is widening still further the use of steel strapping by the retail dealer.

Strapped lumber: When strapped in convenient 500 and 1,000 ft. packages, orders can be quickly filled using a 4,000-lb. capacity lift truck. Dealers in increasing numbers are steel strapping their lumber before it goes into yard storage. The banding frequently has the name of the lumber dealer imprinted on the clip that binds the strap together. The strapping itself also is often dealer identified as a form of advertising.

Deliveries are easier with strapped lumber because they can be rolled off or dumped at the building site with a minimum of time. Banded lumber is also less liable to pilfering on the job.

New Ultra-modern Low-Friction truck engines give you

Gas Savings UP TO 14%

Designed for today's Speed Hauling needs!

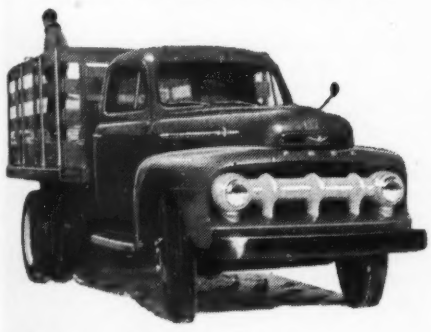
DYNAMOMETER TESTS like this, over 50,000 hours on one engine model alone, proved new Ford LOW-FRICTION engines develop more power per cubic inch, save up to 14% on gas!

New LOW-FRICTION design LIBERATES POWER ordinarily held "captive" by engine friction! IT SAVES GAS! It saves wear!

Good news for truck users! Ford's new, ultra-modern LOW-FRICTION truck engines break away from the traditional "European" long-stroke piston design. They introduce a friction-reducing *short-stroke* in three completely new engines in Ford Trucks for '52.

Ford LOW-FRICTION design incorporates new direct-breathing OVERHEAD-VALVES . . . gives you new HIGH-COMPRESSION, for extra wallop to meet today's Speed-Hauling needs. Here's truck engineering that your Ford Dealer will be proud to tell you more about today!

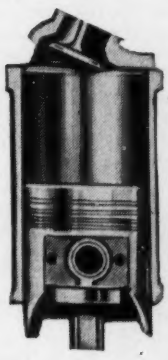
Availability of equipment, accessories and trim, as illustrated, is dependent on material supply conditions.



For '52 Ford offers a full line of trucks half-ton Pickups to 20-ton (G.C.W.) BIG J 5 great engines from 101 h.p. to 155 h.p., or Six. 3 new LOW-FRICTION engines, plus fam. V-8 (now 106 h.p.) and Big Six (now 112 h.p.).

NEW LOW-FRICTION DESIGN

OVERHEAD VALVES for deeper direct "breathing"!
HIGH-COMPRESSION punch with regular gas!
SHORT STROKE cuts piston travel up to 20%!



Friction reduced in many ways: Autothermic Pistons have built-in clearance control. **Precision-molded Alloy Crankshaft** cuts friction and wear at journals. **New Full-Flow Oil Filter** screens every drop of oil every time around. **Result:** Up to 30% cut in friction "power-waste" . . . the big reason why Ford can promise gas savings up to 14%!

FREE

MAIL THIS COUPON TODAY!

Ford Division of FORD MOTOR COMPANY
3270 Schaefer Rd., Dearborn, Mich.

Please send me without charge or obligation, complete details on the new Ford Trucks for '52 and the five great Ford Truck Engines!

FULL LINE ☐ HEAVY-DUTY MODELS ☐
LIGHT MODELS ☐ EXTRA HEAVY-DUTY MODELS ☐

Name_____
(PLEASE PRINT PLAINLY)

Address_____

City_____ State_____

Check here if student ☐

FORD TRUCKS for '52 cost still less to run!

STEEL strapping of lumber permits "packaging" orders well in advance ready for immediate delivery. Packaged lumber will not shift on trucks or spread against stakes.

FILAMENT tapes are now used for bundling and palletizing building products. This item can be applied quickly by hand without special tightening devices.

Other uses: Steel strapping is also useful in making up small-lot orders that are compact and easy to handle. Customers with cars prefer tightly banded packages because they prevent loss of material while being transported. Some dealers are strapping the top layers of concrete blocks being transported with lift trucks. The banding offers safer, faster deliveries with toppling eliminated.

Filament Strapping: Heavy-duty bundling and palletizing jobs in the building products field are now being done faster and cheaper as a result of a new idea in tape—the idea of using "stick-at-a-touch" pressure-sensitive filament tapes.

Tensile strengths in excess of a quarter-ton per inch of width are not uncommon for such tapes. Their high strength is derived from thousands of continuous "cable-like" filaments of rayon or glass. Such "cables" reinforce the tape "like steel rods reinforce concrete" or "like steel cables support suspension bridges."

Today, filament tapes have been adopted for an almost amazing variety of jobs—such as banding coils of steel; bundling aluminum sheets, metal rods, lumber and products made therefrom; and holding sheets of glass together for storage and shipment.

Other jobs for the tape include bundling wall board, veneer, machinery parts, pipes, steel rods and tubes, and other materials by wrapping the tape once around the load and back on itself. Its pressure-sensitive adhesive grips immediately on contact. For palletizing jobs, filament tapes can be applied quickly by hand; sticks immediately without requiring special tightening devices; and presents no danger of slipping or gouging the load. The tape can also be adapted for use on special automatic bundling equipment, such as girth wrappers, etc.

LUMBER HANDLING EQUIPMENT

Many plants faced with the necessity of reducing manufacturing costs and increasing production have installed power-operated lumber handling and stacking equipment, including:

Lumber Stackers and Unstackers, Cable Lumber Lifts, Breakdown Hoists (for breaking down lumber loads at fast-feed machines), Electric Swedes (automatic pull-off device for removing from the sorting chain, boards which have been pulled out of line), Power Transfer Cars and Car Pullers.

Although power-operated lumber stacking equipment was originally developed for use by the larger mills on the West Coast, this equipment has been modified and adapted to meet the stacking and handling needs of the smaller and medium-sized mills in the southern, eastern and central sections of the country, where daily capacities are not as great as on the West Coast, and conditions are different.

STAGING HORSES AND SCAFFOLDING

There are available on the market several types of staging horses and scaffolding of steel welded construction and designed to collapse into compact form for storage. This equipment is in great demand by contractors and builders.

Many dealers have added these products to their lines not only as resale merchandise, but as rental equipment for their contractor-builder customers.

Since the horses and scaffolding are exceptionally durable, their rental will realize a high return over a period of time, and the additional service of the dealer to his customers has a high good-will value.

TRUCKS AND TRAILERS

Proper selection of truck and trailer equipment, based on the needs for each yard operation, is essential in order to insure the most efficient and economical transporting of materials.

In the past, most dealers confined their choice of trucks to the maximum size required, considering it was better to have all of one size rather than several sizes. This, however, has proved costly, particularly, where a dealer has a high percentage of light delivery.

The best way to select exactly the correct equipment is to let the truck manufacturer or dealer analyze the problem and make his recommendations.

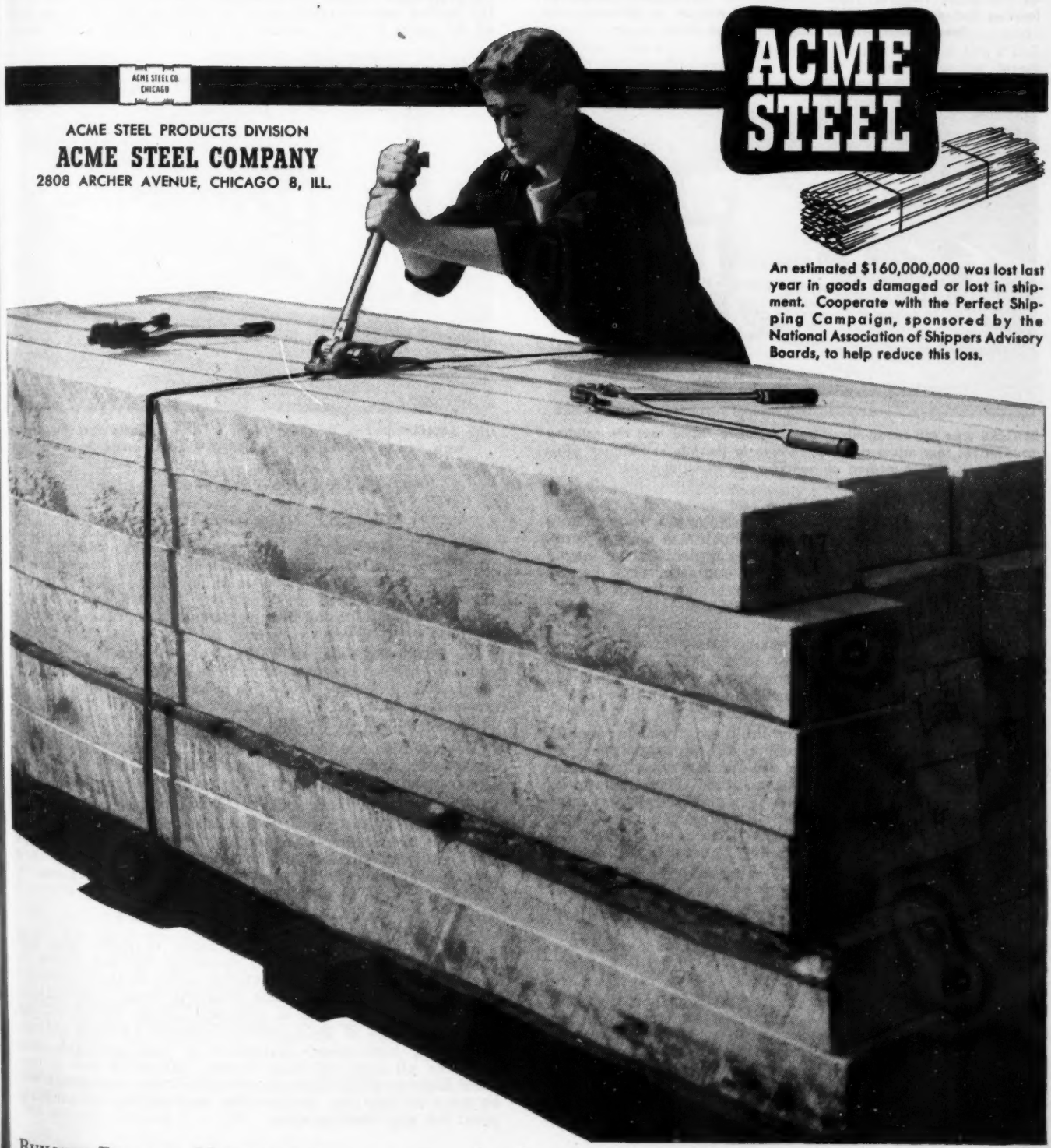
There are today, sizes and types to suit all purposes; and the ability of the automotive industry to produce in amazing numbers, has ended the acute shortages that existed years ago.

Present day models are designed from the standpoint of three major considerations: driver comfort and safety, ease of maintenance, and performance. Wider and more comfortable cab seats; stronger, welded, all-steel cabs; better visibility; more conveniently located controls that operate with less effort; shorter turning radii, better weight distribution, etc. are a few of the major improvements in recent models.

The new trucks reflect extensive study of actual job and load conditions. Manufacturers are in a position now to recommend specifically a truck that will efficiently and economically perform any particular job, or type of service.

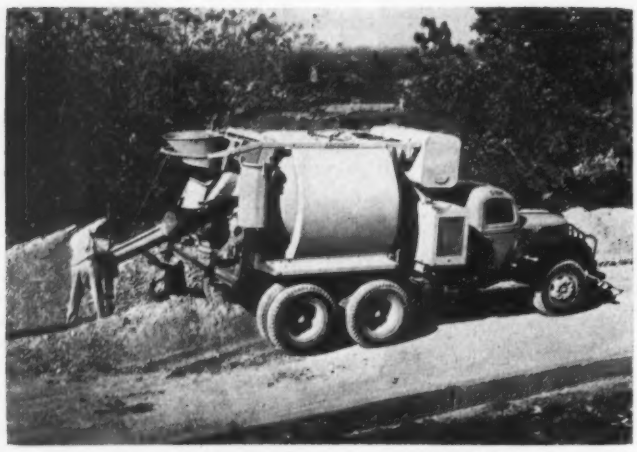
Many dealers have found that their own delivery problems require several types and sizes of trucks, rather than just one. As a result, their delivery costs have been reduced.

Acme Steel Strapping Insures S.A. *(Safe Arrival)*


ACME STEEL CO. CHICAGO
ACME STEEL
ACME STEEL PRODUCTS DIVISION
ACME STEEL COMPANY
2808 ARCHER AVENUE, CHICAGO 8, ILL.
An estimated $160,000,000 was lost last year in goods damaged or lost in shipment. Cooperate with the Perfect Shipping Campaign, sponsored by the National Association of Shippers Advisory Boards, to help reduce this loss.

IN THE HIGH VOLUME YARD, these tractor trailers have simplified loading and delivering. While the fleet of tractors is delivering one load, another trailer may be loaded in the yard.

THE STANDARD flat bed truck has universal use in the lumber yard. This modern cab-over-engine model provides for the cab to be tilted off the engine in a few seconds for engine maintenance and repair.



DEALERS who sell ready-mixed concrete have found that the rotating drum mixer that mixes a batch enroute to the job is the most efficient method of handling the material.

THIS SMALL concrete batching plant is a good size for the dealer who has a moderate business in ready mixed concrete.

This is particularly true with the dealer who must make numerous small deliveries, in addition to his normal routings. One or more smaller units to supplement the larger and less cost than trying to make one size truck handle trucks provide better service, easier scheduling of routes, all delivery requirements.

The new trucks reflect extensive study of actual load conditions. Manufacturers are in a position to recommend the best and most economical type to be used under typical dealer operating conditions.

While the use of trucks by building products dealers in the past has been centered in the lighter types, an increasing number of dealers are finding use of medium and large-sized truck and trailer units. These combinations prove extremely versatile. The trailer can be loaded while the power plant is used for other purposes. Line yard operators who are concerned with inter-yard movement of mass quantities of building materials and dealers specializing in selling to industrial customers are among those who are making extensive use of the truck-trailer combination.

Mechanical Unloading

Mechanical unloading devices for truck beds and trailer beds are helping to speed deliveries and reduce labor costs. One of the most recently announced devices is hydraulically operated and consists of an extra roller supporting the tail end of the load. The roller is cranked by an arm pivoted under the rear end of the chassis and controlled from buttom located both on the rear of the truck and on the steering column in the cab.

CEMENT MIXING EQUIPMENT

Many dealers, in answer to a need in their trading area for mixed concrete, have added this feature of service to their business. In most cases this was no radical departure from their previous services because sand, aggregates, cement, etc. had been a part of their lines for many years.

No matter to what extent a dealer wishes to enter the concrete mixing business, there is a suitable type of equipment to fit his needs; not only in stationary mixers but in the mobile units as well that mix enroute and deliver the finished product at the job site.

Dealers also are buying small mixing plants which they rent to an individual or contractor on a per day basis. Thus, in addition to the materials, they are also adding a profit by supplying this rental machinery.

Many manufacturers are in this field with a full line of high quality mixers. Before deciding definitely what type and kind you feel is adequate, it is better to call in a manufacturer's representative for his expert opinions.

CONCRETE BLOCK PLANTS

The popularity of concrete blocks in both light and heavy construction, and the necessity for the source of supply of these products relatively close to the consuming area, has led many building products dealers throughout the country to install a concrete block manufacturing plant as a part of their overall material's supply service.

Modern, high-speed equipment is now available that produces all sizes of these blocks, efficiently and of uniform high quality. Manufacturers of this equipment will be glad to help the dealer plan and set up an adequate plant for any trading area.

Section 26 Financing and Insurance

Under the current period of national emergency, all phases of financing are regulated and restricted. A knowledge of the existing regulations and their provisions is important to all retail lumber and building products dealers, since term financing has become a major consideration in the sale of new homes, improvements, and repairs.

Tighter Controls — Government credit controls went in effect in 1950 with the specific purpose of reducing the volume of home building as a means to lessen competition for critical materials. The controls limit the value of the loan in relation to the property's value and reduce the maturity period for repaying the loan. The Defense Housing and Community Facilities and Service Act of 1951, which became effective September 1, relaxed some of the existing controls, especially with respect to homes in the lower price range.

Minimum down payments required under present controls for FHA and conventional mortgage loans and for mortgage loans made to veterans by the Veterans Administration are shown in Table 1. Maturity for the loan may not extend beyond 20 years, unless the property has a value of $12,000 or less, when it may be as long as 25 years.

TABLE 1: New Terms Under Regulation X and Related Credit Restrictions

Value or Price Per Family Unit	Maximum Mortgage Loans	
	FHA Loans	VA Loans
	Dollar Amount	Dollar Amount
$5,000	$4,500	$4,800
6,000	5,400	5,760
7,000	6,300	6,720
8,000	6,800	7,520
9,000	7,650	8,460
10,000	8,500	9,400
11,000	8,800	10,120
12,000	9,600	11,040
13,000	10,000	11,210
14,000	10,400	11,380
15,000	10,800	11,550
16,000	11,000	11,800
17,000	11,200	12,050
18,000	11,400	12,300

Actually in spite of present credit restrictions it is still possible to get a loan much easier than it was 20 years ago. A study of financing available for buyers of a low-priced home stresses the government emphasis on this market. The purchaser of a home valued at $10,000, for example, is required to pay only $1500 as a downpayment. A veteran pays but $600 down on the same home.

The decision of government to encourage home buying in the $10,000 bracket is understandable when we realize that over a third of the new home buyers using FHA financing in 1950 were families with monthly incomes of less than $300. As discussed in Section 23 the Lumber Dealers Research Council has sponsored a Small Homes Council project for development of new methods of cutting building costs and producing improved homes for people of average income.

Mortgages up to $4750 may be insured by the FHA up to 95% of the appraisal value of a single-family home. This special section 8 of the National Housing Act was written especially for low income families in suburban and outlining areas. Certain requirements have been waived for this class of home. For example, the home may lack specific details on finished floors, closet doors, cupboards, interior trim and the like that the owner can install himself.

How Much to Pay—No formula can be established for determining how much a family can spend for a home. A practical estimate, however, can be reached by studying the family income and living expenses.

The Federal Housing Administration has financed one of every three new homes in the United States since the agency was established in 1934. The reports on thousands of these loans has been analyzed each year and the FHA has a rather factual basis for its suggestions for home buyers.

Table 2 is a study of the average FHA mortgages insured in 1950. By consulting this chart a family can easily see just how much they can afford for a house.

The University of Illinois Small Homes Council recently published a circular, "Financing the Home," which gives good pointers to homeowners. This circular is reprinted below by permission of the Council.

Housing is one of the largest items in the family budget. For most families, it will take from 20 to 30 percent of the income, either in rent or in ownership.

Low-income groups must spend a large part of their budgets for housing, food and clothing. As the annual income goes up, the family has greater freedom to choose the amounts to be spent for such things as housing, cars and recreation, or to be kept as savings.

A rule of thumb sometimes used to determine the amount to be spent for a home is: "You can afford a home equal to 2½ times your gross annual income." This would require 20 to 25 percent of the take-home pay and is only an estimate since there are many modifying factors. Some families successfully finance homes worth three or more times their annual income.

Loan and Interest—Every cent of interest which you pay on borrowed money is an expense. The less you pay in interest, the better is your home ownership investment. You can reduce interest costs through:

A low interest rate. Obtain the lowest rate possible on the basis of your record as a credit risk.

A large down payment. The greater the down payment, the greater is your equity in the property and the less you will have to borrow. As a result, your total interest costs are less. Sometimes a large down payment also permits the lender to set a lower interest rate since the risk is reduced.

A short payment period. The more you pay each month, the shorter period of time you will have to pay and, hence, the less total interest you will pay.

A loan which permits pre-payment (payment in advance of the due date).

Because a long-term loan requires smaller monthly payments than a short-term one, it is usually best to secure a relatively long-term loan which permits pre-payments. This assures moderate monthly payments and allows you to pay faster if your earnings permit. If you pay off the loan as quickly as possible, you will save interest costs; you will also build up your equity in the property faster.

Property Taxes—Tax rates on real property vary in different localities. Find out your rates from your local officials or a lending agency. Assessments for civic improvements may be added to your tax bill. Taxes tend to increase over the years.

Insurance—To protect their mortgage loan on the investment, lending agencies require you to carry fire, wind and other insurance on your property. Your policy should also provide enough insurance to protect your equity. See your insurance agent for detailed information.

Upkeep—On new homes, maintenance costs will be small for the first few years, but they will become greater as the house grows older. Over a period of years, you will probably also want to install improved equipment and new conveniences which appear on the market. If you buy an older house, you should allow a greater sum for upkeep than that needed for a new home.

Certain expenses which are "preliminary" to the loan must be budgeted before the size of the down payment can be determined. These expenses vary, depending on whether you are buying or building a home. Some of them may be included in the loan; others must be paid in cash at the time the loan is made. Occasionally some of these expenses are paid by the seller of the property.

When buying a home, preliminary costs usually include: Appraisal fees, Loan fees, if any, of your lending agency, Revenue stamps, notary fees, Fees for recording the mortgage and deed to the property, Legal charges for examining and transferring the title to the property (to show clear ownership), Pro rata insurance and property taxes, Survey of property to establish property lines.

When building a home, preliminary costs include most of those for buying a house, plus such costs as: Cost of plans or architectural services, Interest on the loan advances ("pay-outs") to contractors, Premiums for insurance, Inspection fees.

In "FHA loans," there are usually certain additional preliminary expenses, such as: 1) the first year's mortgage insurance premium; 2) an advance payment for first year's taxes; 3) the first year's premium on hazard insurance; 4) fees for photographs of the house; and 5) FHA loan examination fee. The examination fee is paid when application for the loan is made; the other items must be paid when the loan is closed.

Extra Costs—In building or buying a home, you may find it necessary to incur certain other expenses, such as landscaping, laundry and kitchen equipment (or repair or modernization if an existing house has been purchased). These expenses must be paid for from your savings unless they are included in the loan.

Types of Mortgage Loans—Mortgage loans are classified by the plan for repaying the loan. There are several types, but the one most commonly used today is the constant payment plan (the regular amortized mortgage loan).

Under this systematic loan reduction plan, the homeowner at regular intervals (usually each month) pays a fixed amount which includes both interest and payment on the loan principal. The monthly payment is the same during the life of the loan. That part of the monthly payment which is used to repay the loan principal increases each month since the amount paid for interest decreases. (Interest payments become less as the loan principal becomes less.)

Taxes and property insurance premiums may be included in the regular monthly payment. These are in addition to the interest and loan payments. If taxes should increase, these monthly payments would increase.

A variation of the regular amortized mortgage plan is the open-end plan. A clause in the mortgage gives the borrower the privilege of obtaining additional funds (for purposes such as remodeling) after the loan has been reduced without going through the formality of rewriting the mortgage. The total loan oustanding at any time is usually restricted to the amount of the original loan.

Other amortized mortgage plans permit increasing payments or decreasing payments each month. These are not in common use.

Another type of mortgage is the straight mortgage. It is used less today than formerly. This plan requires that the loan be paid in full on a specified date (usually one to five years). Interest is paid at stated periods. (The terms of the loan may permit pre-payment.)

FHA and VA Loans—Frequent reference is made to "FHA loans" and "GI or VA loans." These are not mortgage plans, but are government insurance or guarantees on loans. The government does not provide the money for the loans; the funds come from the lending

TABLE 2: Average Characteristics of FHA-Insured Mortgages

Mortgagor's effective monthly income	Average									Mortgage as a percent of FHA valuation	Ratio of FHA valuation to annual income
	Mortgagor's monthly income	FHA valuation	Mortgage principal	Total monthly mortgage payment	Total monthly housing expense	Monthly rental value	Monthly taxes and assessments	Calculated floor area (sq. ft.)	Number of rooms		
Less than $150.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
$150 to 199.....	$183.00	$6,533	$5,723	$41.25	$59.37	$53.59	$5.23	753	4.2	87.6	3.0
200 to 249.....	226.49	7,158	6,251	45.79	64.72	58.46	6.41	789	4.3	87.3	2.6
250 to 299.....	271.39	7,836	6,770	50.61	70.78	64.00	7.74	828	4.4	86.4	2.4
300 to 349.....	318.45	8,488	7,255	54.63	75.22	69.04	8.67	878	4.5	85.5	2.2
350 to 399.....	368.36	8,993	7,627	57.77	78.47	73.11	9.27	924	4.7	84.8	2.0
400 to 449.....	416.71	9,355	7,874	60.29	81.53	75.80	9.62	950	4.7	84.2	1.9
450 to 499.....	467.85	9,630	8,073	61.49	82.67	78.12	9.88	991	4.8	83.8	1.7
500 to 599.....	530.62	10,171	8,436	64.74	86.45	81.82	10.41	1,035	4.9	82.9	1.6
600 to 799.....	660.19	11,444	9,290	75.22	94.94	91.73	11.72	1,140	5.2	81.2	1.4
800 to 999.....	857.09	12,432	9,938	80.71	98.00	99.23	13.98	1,228	5.3	79.9	1.2
1,000 or more.....	1,284.43	12,772	10,301	87.94	111.33	101.89	14.18	1,324	5.5	80.7	.8

THE COLUMN headed "Total monthly mortgage payment" includes the monthly payment to principal, interest, FHA insurance premium, hazard insurance, taxes and special assessments. "Total monthly housing expense" adds estimated monthly cost of maintenance, regular operating expense items such as water, electricity, gas and fuel.

agencies through which homeowners obtain loans. The government merely sets up credit and building standards which, if met, permit the loan to be insured by the FHA (Federal Housing Administration) or guaranteed in part by the VA (Veterans Administration).

FHA borrowers underwrite the insurance since each pays ½ of 1% of the amount outstanding on his loan into a common insurance pool each year. This pool covers any loss and may pay dividends to the borrowers if losses are small. This FHA insurance premium is included in the borrower's monthly payments. GI borrowers pay no insurance fee on VA guaranteed loans.

The insurance and guarantee features of FHA and VA loans liberalize home financing since they protect lenders against loss, thereby reducing the large margins of security which lending agencies set up to protect themselves. Lenders thus are induced to make larger loans in relation to the value of a house than they could without the guarantee. Since most lenders are trustees for other people's savings, either a safe margin of security or government assurance against loss is necessary.

Package Loans—Often when a family buys a newly completed house from a contractor or enters into a contract for the building of a home, the financing has been previously arranged by the contractor who offers a "package" loan. Under it, the buyer pays a regular amount monthly over a period of years. This includes payment on the loan principal, interest, taxes, insurance. If you should assume a "package" loan, make sure you understand its terms.

Where To Go for a Loan—Every mortgage transaction involves individual problems of financing. Seek advice about loans from reliable lending agencies before you obligate yourself in any way. Established sources of loans include: Banks (commercial and savings), Mortgage bankers who represent individuals, banks, insurance companies or other institutional investors, Savings and loan associations (or building and loan associations), Title and trust companies who may loan their own funds.

Construction Loans—If you are going to build a house, you will probably need money to pay your builder as construction progresses. If so, ask lending agencies whether you can get money for these advance pay-outs to your builder. Find out the charges for such a construction loan. Ask:

At what stages of the construction can I get the money? Can I arrange these construction loan advances and my final mortgage as one contract? Who will handle the entire payments to the builder (my funds as well as those loaned to me)?

What inspection, if any, is provided as a check that my house will be built according to specifications? Or, is it my responsibility to have inspections made by an architect or other qualified person?

Consult a lending agency on the possibility of obtaining a loan before you incur large expenses for plans, working drawings and specifications. Later, when the possibility of getting a loan is assured, you will need plans and specifications so that the amount of the loan can be determined.

Applying for a Loan—Having found a loan plan which meets your needs, you are now ready to make application for a loan. This is your formal request for the loan from the lending agency which you have selected.

Information generally asked for in applications forms includes.

The amount of loan you want.

The terms and conditions of the loan requested (including whether a GI or FHA loan is desired).

Personal data so that the lending agency may judge your credit responsibility. This information will include credit references, current income, current obligations, possible future expenses.

Identification and description of the property on which you want the loan and which you will pledge as security.

Investigation—On the basis of the application form, the lending agency will verify: 1) the personal information submitted, 2) the fact that you have—or will have—the property described, and 3) your right to pledge the property as security.

Property Appraisal—The lending agency before granting the loan must form an opinion as to the value of the property described. This is a point which can present misunderstandings since the borrower's appraisal and the appraisal of the lending agency may not agree. For this reason, the latter's valuation is generally not revealed to the borrower.

The lending agency's appraisal is not on a man's house as property on the current market, but as security. It represents the market value of the property during the life of the loan if the house should ever be sold. It does not recognize the high prices of homes in inflationary periods, nor does it recognize special usefulness to a particular homeowner. The property might cost a great deal and be very desirable to one family, but it might not have an appeal to other people should it be offered for sale. (In a GI loan transaction, the price of the property cannot exceed the VA appraisal.)

Decision as to the Amount of the Loan—After investigating your credit rating and appraising the property to be financed, the lending agency tells you how much it can lend.

If you cannot obtain the amount of the loan you need from the first lending agency you interview, try another reliable agency. If this application does not result in the desired loan, re-examine your proposal to see what is wrong with it. It may be that your house is too individual in its design, or the site you have tentatively selected is poorly located, or your earning capacity is not great enough to carry the amount of the loan you need.

In an FHA loan, the appraisal of the Federal Housing Administration determines the amount of the loan which it will insure.

Letter of Commitment—Usually, before the loan is formally granted, the lending agency will issue a letter of commitment in which the terms of the mortgage are outlined. This enables you to make contracts with an architect and contractors, and also to proceed with arrangements to purchase property. Be careful about making any payments until your lending agency has definitely committed itself to granting the loan.

Closing the Loan—After the loan has been approved, title records of the property must be examined. Certain papers must be signed in order to "close the loan." At that time: 1) you are usually required to make your down payment (or to pay the rest of it if you have already paid part) and to pay the preliminary costs; and 2) funds that are turned over to you by the lending agency so that you can complete your purchase.

Assuming an Existing Mortgage—If you are considering the purchase of a house with an existing mortgage, be certain that you understand the terms of the loan as previously made, as well as the terms of the purchase contract. Weigh these terms against your budget allowance for housing to make sure that you are financially able to handle the obligations.

In assuming such existing indebtedness, have the papers examined by someone who is qualified to advise you. Be particularly cautious on the matter of when actual ownership is conveyed to you. As evidence that you have paid your money and own the property, you should possess the deed and the opinion of clear title.

Insurance a "Must"—The buyer of a new home should provide in his budget adequate insurance coverage. Fire insurance policies have been written for hundreds of years but the home buyer today often feels that more complete protection is required. Extended coverage policies are especially popular because they protect the home not only from fire but water, wind, hail, storms, riots, smoke damage and even falling aircraft and automobile damage.

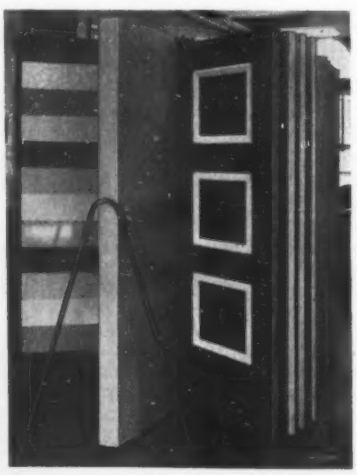
Personal property, however, is not covered in this extended policy and additional policies are required for damages by fire of furnishings, clothes and equipment. And still more policies are well worthwhile. Liability insurance is available to insure against claims for injuries by persons on your property. Mortgage insurance is also popular to pay off the remaining debt on the home in case of death. Finally, title insurance guaranteeing you a clear title to the property is an accepted investment of many home buyers.

Make the Lumber Yard of Yesterday the PLANNING CENTER of TODAY — with

MULTIPLEX

Swinging Panel MERCHANDISERS

Why continue to use the lumber yard method of selling? Today the buyer is offered a wider selection from which he can make his choice. The modern and easy way to show your entire line to the customer is through the use of Multiplex Merchandisers. Doors can be arranged on pivot type holders . . . samples of molding, woods of all types, composition board, roofing materials, hardware and all types of building and lumber specialties can be arranged on Multiplex Swinging Wings. Without fuss or bother the customer can make a quick selection saving your sales time.



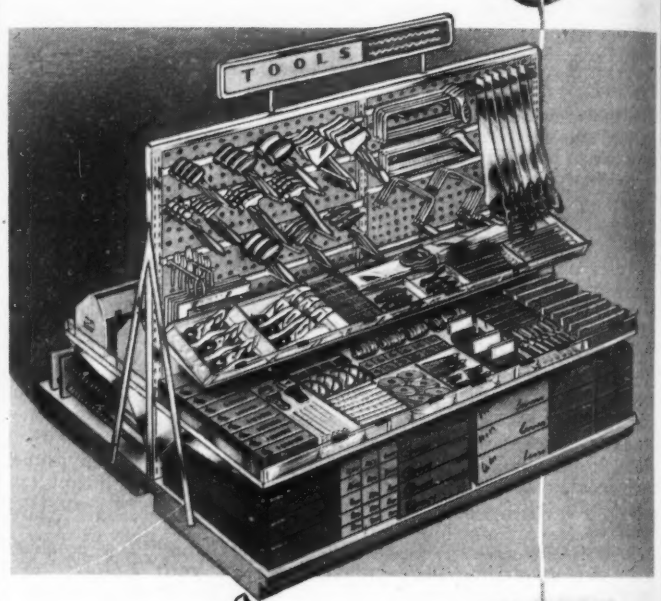
Available in models and sizes to meet all needs —

Multiplex Merchandisers are available for displaying doors only, or in swinging, steel-framed panel models to accommodate a wide range of merchandise. These modern merchandisers are being used by hundreds of building supply retailers. Reports show that the added sales that result pay for the installation in a short time. Mail coupon for full information.

MULTIPLEX DISPLAY FIXTURE COMPANY
907-917 N. Tenth Street St. Louis 1, Mo.
Send complete literature on Multiplex Merchandisers

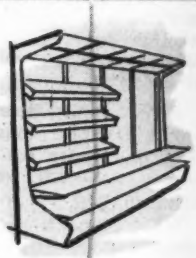
NAME .....
COMPANY .....
ADDRESS .....
CITY ..... STATE.....
A51

Sales Bait



RHC

Spacemaster MERCHANDISING EQUIPMENT



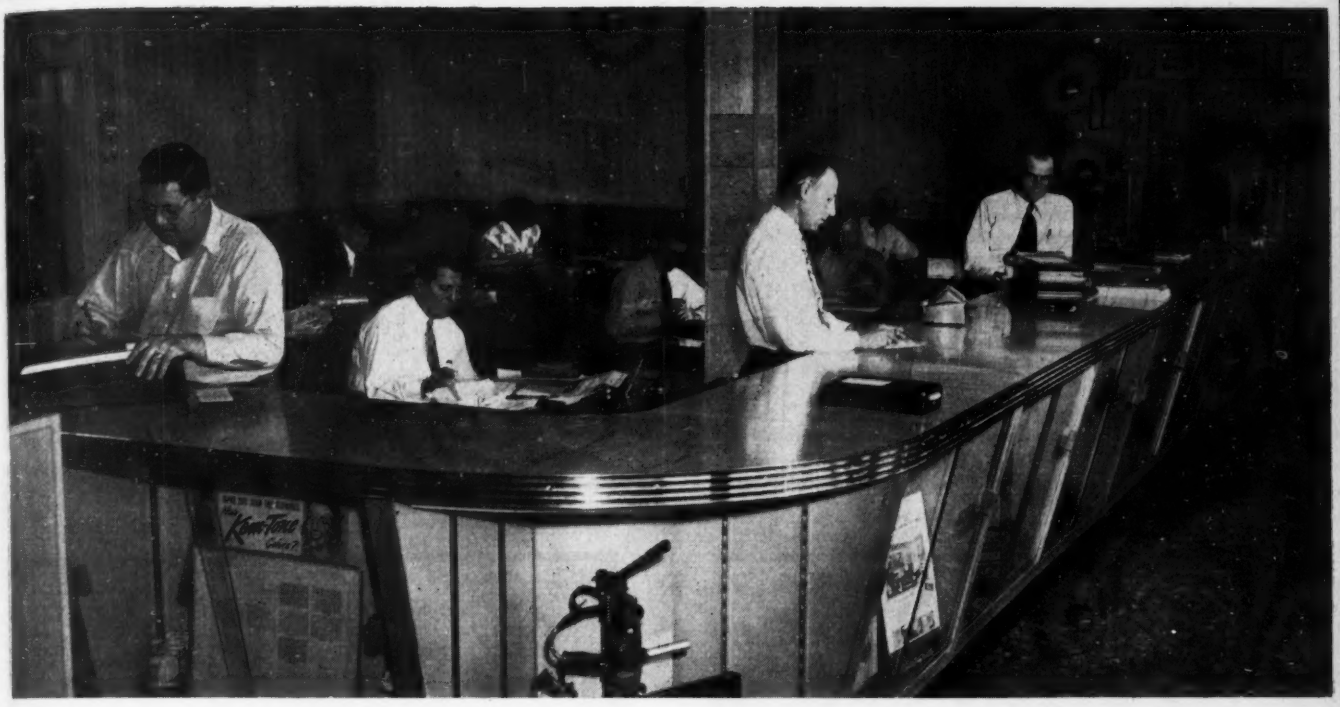
SPACEMASTER wall sections, flexible and easy to install.

You'll lure them in . . . and they'll buy, for your customers just can't resist selecting merchandise when mass display and visual merchandising go hand in hand. With *Spacemaster* you will have modern, efficient visual merchandising units, set-ups that can be quickly and easily changed to meet any special requirements. Let your increased sales and profits tell the final story.

Let us send you our SPACEMASTER 50-S brochure—full of interesting facts and useful information. Write Dept. AL-D.

SPACEMASTER standards and brackets are excellent resale items to homemakers and home builders.

REFLECTOR-HARDWARE CORPORATION
WESTERN AVENUE AT 22ND PLACE
CHICAGO 8, ILLINOIS



Section 27 Office and Store Equipment

STORE LAYOUT

Considerable attention is being given to the proper arrangement and layout for the modern building material store, and many highly efficient sales plants have been individually designed and put in operation throughout the country.

There are, however, so many variable factors that exist in this field, it is not practicable to establish any "rule of thumb" formula that would apply to all retail building products operations.

So much depends on the dealer's objectives in setting up a store, his location, the type of merchandise to be displayed, the space available, and many other considerations. For that reason it is highly advisable to plan and develop a sales area as a result of an individual study during which all of the variable factors are taken into consideration and provided for.

There are, however, a few fundamentals that apply to all layouts, all of which are essential for the best in good planning. First of these is the shape of the sales room. The most satisfactory is rectangular or square; and if rectangular, the narrow dimension should be at least 30 feet.

The placement of the office and sales counter should demand traffic through the store to it. A counter immediately inside a main door eliminates store "shopping" and decreases the amount of spontaneous sales a store can otherwise produce.

Decorations should be neat but not elaborate. The primary function of a store is to display merchandise to best advantage, and frequently, a too elaborate room decorative scheme will detract from the merchandise.

Display arrangement should be regimented by types of products, and each department or major display fixture should be clearly identified. Slower moving items should be placed in the main traffic pattern through the store, with the more popular items in such a position as to draw customers through all parts of the store.

All merchandise should be priced. This is one of the major essentials of good merchandising.

DISPLAY FIXTURES

There are several manufacturers in the United States who manufacture specially designed fixtures for building products. Many manufacturers of materials have also developed effective fixtures for their own products that are available to the dealer. For the most part, however, the dealer has had to do his own design work, and in many cases has built his fixtures in his own shop.

As with store layout, however, there are certain fundamentals of good display that should be considered before deciding on the type and sizes of fixtures in a store. Some merchandise can be best displayed on a wall cabinet, and when arranged on an island, fails to exhibit itself to proper advantage. Conversely, other merchandise on a wall cabinet could be shown in a more compact space on an island.

STORE FIXTURES

Store fixtures serve only the purpose of holding and containing the products in a store. Their design must be made from the standpoint of good visibility, ease of store maintenance, and proper exhibition of the products. In themselves, they should not be elaborate to the extent that they detract from the merchandise. Therefore perfectly adequate fixtures need not be expensive.

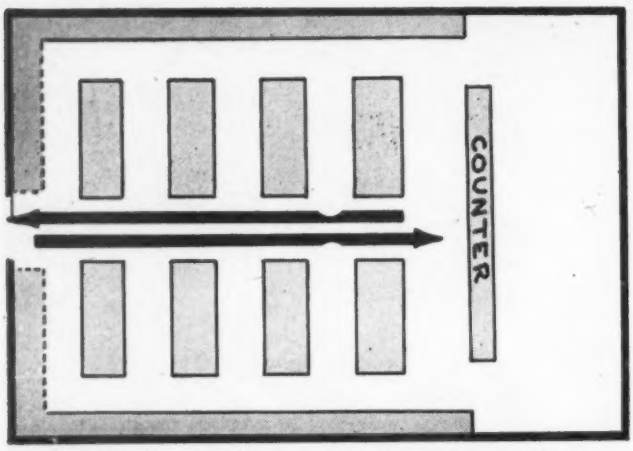
Above all, however, all fixtures in a store should be movable. A store area should be flexible to the point that a complete rearrangement could be made at any time without disturbing any of the room fittings. This is even true of wall cabinets.

AMERICAN LUMBERMAN, recognizing the need for the latest information on store layout and fixture design, is serving the dealers of the country as the clearing house for all worthwhile data that comes to its attention. Any dealer with a specific problem is invited to write in for a personal answer to his question.

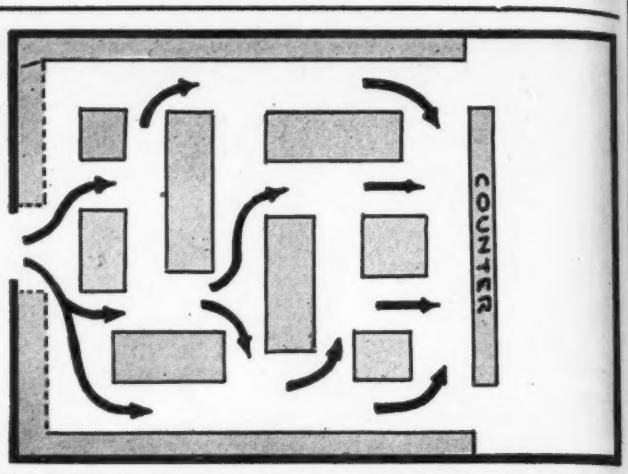
OFFICE MACHINES

The amount and type of office machines required by a dealer, of course, depends on the size of his business. There is, however, a wide selection of office equipment of all types, designed to increase the efficiency of this very important branch of the operation. Among these are:

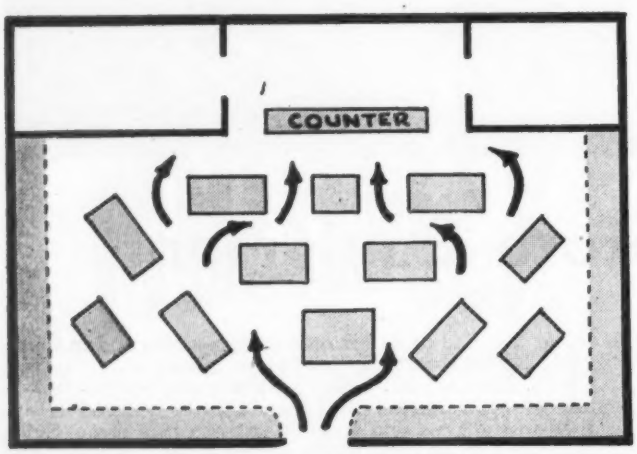
- Accounting machines
- Adding machines
- Addressing machines
- Autographic registers
- Billing machines
- Bookkeeping machines
- Calculators
- Cash registers
- Check writers
- Comptometers
- Continuous form registers
- Correspondence files
- Dictating machines
- Duplicating machines
- Inter-office, yard communication systems
- Metered mail machines
- Payroll machines
- Safes and strong boxes
- Time stamps
- Time clocks
- Typewriters



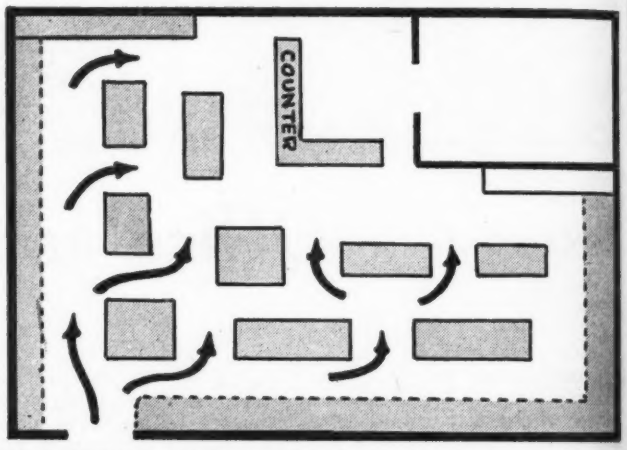
A REGIMENTED store with a main aisle directly between the entrance and sales counter automatically establishes a natural traffic pattern along that route.



THIS IS THE SAME store as the one at the left, only with a different arrangement of fixtures. Note how the change establishes a widely different traffic pattern.



THIS LAYOUT scatters traffic somewhat but leaves two areas outside the pattern. These must be dramatized by other methods in order to draw traffic.



ESSENTIALLY THE SAME as the store at the left, with different positioning of door and counter. Traffic pattern is more diversified.

RECORDS CAN INCREASE PROFITS

Records should be the most valuable assets of a building supply company operation. That is what they become when they are designed and used for direction and control of every phase of the business. Then they point to innumerable ways to increase sales and to reduce costs. When they show how to get more business and to handle it more profitably, they are doing the job they ought always to do.

Without good records and the direction and control they make possible, it is out of the question to avoid losses and needless profit leaks. Nobody, no matter how well he knows his business and how closely he keeps his fingers on what goes on, can remember and connect up the multitude of details correctly without recourse to records. That is the main reason for records and adequate record protection against fire and other hazards.

Financial Records Are Basic

Buildings, trucks, furniture and stocks of many kinds of building materials have to be inventoried and valued in money. To be understandable and understood, all the transactions of any business must be reduced to money terms and expressed in financial statements that summarize the net results.

Today a patented accounting board has been adopted by many small businesses to give them the same quality of accounting control for management purposes that large organizations get from their large staffs of accounting department employees and elaborate machines.

The principle of the system is simple. Instead of writing the same entry three times with three possibilities of a mistake, a single writing produces three records. For example, a single writing produces an invoice, an entry on an accounts receivable ledger card and a journal entry. If one is correct, all are correct. A single writing when making up a payroll prepares the employee's pay check or earnings record, the history earnings record for Social Security report and the payroll register.

Of importance to the dealer is the financial control obtained as a byproduct of the journal posting. The seven major control accounts needed in a distributing business are posted to a single journal which is a complete daily financial statement. Each day, when the last posting has been made, the columns and lines are added and entered. The key figures are the column totals. To them are added the balance forward from like columns for the day before. This provides a daily statement of condition for the year to date, with a proof of balance.

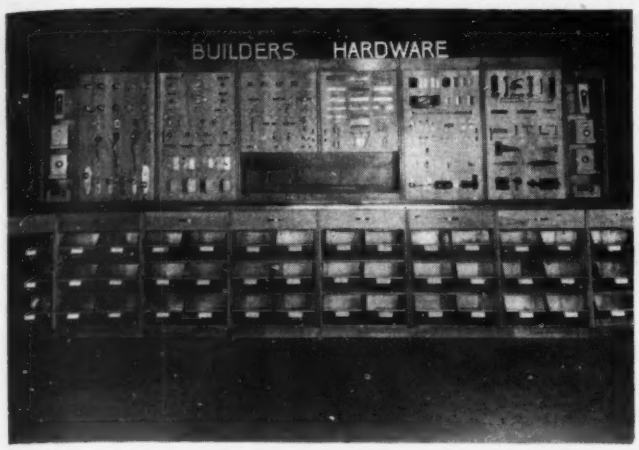
With this system, a building supply company owner has daily knowledge of his entire financial picture. With this control, he can take steps at the first sign of warning to forestall trouble. If too much money is getting into inventory, he knows it at once. If collections commence to lag, he is aware of it immediately. When a condition is known and understood, it is more than half corrected, for steps can be taken to fix it.

Subsidiary Records for Profit Control

There is no substitute for exact knowledge of overall financial position. The overall financial reports are summaries that point directions of approaching strengths and dangers. They are not intended to show details. Subsidiary records are necessary to give details control. Summary and detail records should go hand in hand to round out complete administrative control.

To be efficient, they should be so set up that the things that need attention can be stopped quickly and acted upon promptly. This is best accomplished through signal control on visible records designed to include all the important facts and to exclude all useless information.

There are two principal methods of handling accounts receivable. The first is the ledger method in which an



SEVERAL MANUFACTURERS specialize in the manufacture of display fixtures for all types of merchandise. This hardware cabinet with nail bins beneath is an example.

THIS ENTIRE STORE area is fitted with stock fixtures, built to suit the dealer's individual layout and merchandising objectives. Other firms make a full line of hardware to equip various types of sales and display fixtures.

WITH EMPHASIS TODAY on maximum operating efficiency, many dealers are analyzing their bookkeeping and accounting systems, putting in modern machines that perform many jobs more efficiently and economically.

THE IDEA OF perpetual inventory systems is gaining popularity with dealers who desire a close control over their merchandise stocks. Card files such as the above are ideally suited for this record.

accounts receivable ledger card is set up for each account and debits and credits are posted manually or by machine.

The second is a ledgerless accounts receivable system called the Simplified Unit Invoice accounting plan. This method greatly simplifies the taking of trial balances and the aging of balances. It is self-analyzing so that no one has to spend hours analyzing accounts to find out which are past due. It picks out the accounts that need collection effort at a glance. It gives complete control. It saves time, and frees clerical time for other important work. It cuts down credit losses and makes credit work easier.

Instead of posting to a ledger, the accounts receivable clerk or the bookkeeper simply files an extra copy of the invoice in a visible pocket which is indexed by the name of the account. If the invoice being filed is the only one outstanding, the clerk moves a signal over the current month. If there are other invoices outstanding, the signal is not touched. That is all there is to posting an invoice — just drop it into a pocket and perhaps move a signal.

When a payment is received, the procedure is equally fast. If the payment covers one invoice or a number of invoices exactly, those paid are pulled from the pocket, stamped Paid and date stamped, and filed away in a paid invoice file. If the invoice paid extinguishes a debt for a month, the signal is moved to show the age of the oldest remaining unpaid balance. If the payment covers only part of an invoice, a partial payment slip is filled out in duplicate. One copy is attached to the invoice. The other copy goes into the paid invoice file. Trial balances are taken by adding up all the invoices in the pockets.

All past due accounts can be seen at a glance, because the signals are over a month that has passed. All inactive accounts can be spotted, because their signals are pushed back where they cannot be seen.

Keeping Inventory Records

Building supplies cost money to own. To be profitable, they have to be turned over at economical rates, so as to make the cost of acquiring them equal to the cost of disposing of them.

It is not enough to be sure from the financial statement that the total value of inventory is in line with sales and with other balance sheet items. It is easily possible for an inventory to meet all financial tests and still be badly out of balance with excess stocks of some things and shortages of others. One safeguard against this risk is a well designed visible stock control record that signals the condition of each item all the time.

An effective stock control record incorporates a number of important features that save time and money and prevent over or understocked conditions by signalling stock condition in terms of time it will last. In addition to the record of receipts, disbursements and balance on hand which a stock record includes, a stock control record has a moving signal traveling over a computing chart to show at a glance how much of each item is in stock and how many weeks it will last.

Two other important features distinguish a stock control record from a stock record. The first is a summary card that shows past sales experience by months with annual totals. This is an invaluable aid to studying trends

Hand-Picked Prospects for You

Day after day, the people in *your* territory who are going to build their own new homes are located by the world's largest construction news gathering organization.

Then . . . a book of catalogs, illustrating and describing the varied products needed for new homes, is mailed to these prospects of yours. This book—Home Owners' Catalogs—is used and kept while these prospects are planning what they will want to buy for their new homes. It is important to you that the products you stock, show and sell are completely described to these buyers *before* they make their final decisions.

PITTSBURGH PLATE GLASS COMPANY

GLASS DIVISION

That is why Pittsburgh Plate Glass Co.—Paint and Glass Divisions distribute their catalogs, "Color Dynamics for the Home" and, "Glamour with Glass", in each 1952 copy of Home Owners' Catalogs. Pittsburgh *knows* this is one way to do a thorough pre-selling job for you. Pittsburgh *knows* these home-planners are prospects for you because they buy the kind of things you sell.

Whatever you sell you can get the names and addresses of hand-picked prospects in your territory.

MAIL COUPON TODAY

Tell me how I can get the names and addresses of prospects for new-home products . . . *in my territory.* (Available in local marketing areas within 37 eastern states only).

NAME_____

COMPANY_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

HOME OWNERS' CATALOGS

Dept. GP2, 119 West 40th St., New York 18, N. Y.

Section 28

Selling and Promotional Aids

SELLING AND PROMOTIONAL programs are based on the successful coordination of three merchandising tools; (1) Advertising, (2) Personal Sales Effort, and (3) Effective Store Display. No one of the three can ever be completely efficient in itself; and even when the three are closely coordinated, the basic program must be logically and consistently planned.

The careful study of proved merchandising techniques is necessary at this time, for in the building products industry, the healthy condition of competitive selling has returned after a long absence. Operating expenses and overhead have not, however, subsided to anything like a pre-war level. Thus, the retail dealer is faced with the necessity of maintaining a steady, high volume of business if he is to stabilize profits. And the only way he may now do this is by doing an efficient job of selling his products.

Let us consider individually the three segments of selling, and discuss the various ways they may be organized and developed into a smoothly operating program.

ADVERTISING

Advertising is more of a prospect getter than a sales clincher, although in many instances it may be the factor that crystallizes the idea to buy in the prospect's mind.

Many dealers lose sight of the fact that advertising is a sales tool that should pay its way. The various media available, if properly used can produce tangible, definite results. Improper planning, however, or the use of an incorrect type of advertising for a specific job, may very likely fail completely.

Active Selling Advertising Media: Certain advertising media, such as newspapers, direct mail folders, radio, handbills, etc. are active media. The ads placed with them should, therefore, do an active selling job. What you want from them are prospects entering your store to buy the merchandise you have mentioned in them.

Results from active advertising are immediate, and you can gauge its success by noting the inquiries and sales of the particular items advertised during the 48 hour period following its appearance.

In order to get the maximum number of inquiries, therefore, the ads used in active media should overcome the primary objections that will enter the reader or listener's mind as he considers your message. There are two major factors of sales resistance that arise in all fields of selling: two questions a person asks himself before deciding to buy; (1) "Do I need the product or service, and (2) Can I afford it.

Retail merchants who have enjoyed outstanding advertising success almost invariably follow a set formula of advertising make-up. To overcome the first resistance, an effective picture of the product is shown, followed by carefully worded "selling" copy. Then the price is shown. In simplified definition, the formula boils down to (1) picture, (2) copy, (3) price.

In publishing prices, if the item or service costs more than the average customer is able to pay for in cash, break down the total cost into its monthly payments. Then the prospect will be able to determine whether he can fit the amount into his budget.

American Lumberman now offers dealers a new consumer magazine designed to reach the unexploited How-to-do-it market. This new publication is a 68 page, four-color magazine that is available imprinted with the dealer's name and address on the front cover. Appropriately called "Home Maintenance & Improvement," it is mailed directly by us to your selected prospects four times a year at just 11 cents per copy.

Institutional Advertising: This type of advertising is devoted to selling a company, an industry, or a general service. It differs from active advertising in that it covers generalities rather than specifics about products. It does not create the buying impulse with readers or listeners that is evidenced by action.

The type of ad placed in the classified section of a telephone directory is typically institutional. So are billboard displays, truck signs, calendars, etc. All of these publicize a company's name and services, and from that standpoint perform a very important function in a well-rounded advertising program. An overbalanced program in this direction, however, will not return full benefits from the advertising dollar, and will not actually create business as will active advertisements in active media.

Specialty Advertising: Many dealers have used advertising specialties, (imprinted pencils, carpenter's aprons, notebooks, and other novelties) with great success. There is no question but that such items are excellent goodwill builders, and good will is the best insurance of customer loyalty you can possibly win. In proper proportion with other types of advertising, specialty items play an important part in many programs; but a top heavy appropriation for specialties at the expense of active selling advertising will result in a program that lacks its maximum sales developing power.

Plan Books—One of the most widely used forms of dealer promotion has for many years been the stock plan book. These are available from a number of publishers, and include a complete selection of designs for every section of the country and in every price range.

As a personalized form of advertising to prospective home builders, plan books are hard to beat. Provision is made for them to carry the dealer's name, address, and slogan on the cover; so they are essentially the dealer's own advertising piece.

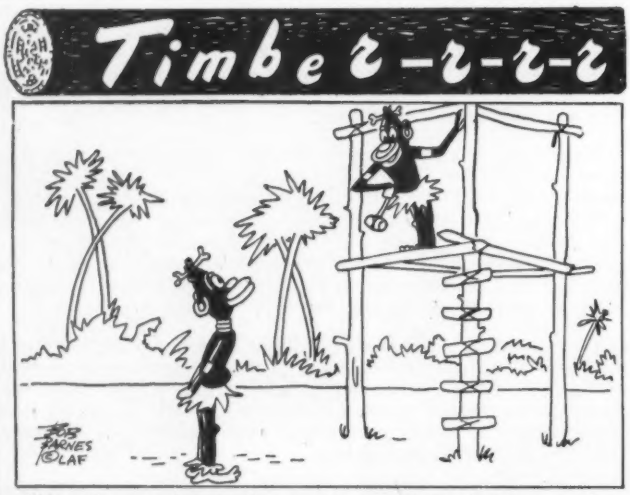
Methods of distribution vary. Some dealers use them as mass promotion pieces, and periodically mail them out to their list. Others keep them available for free distribution to persons who come in and express an interest in securing ideas for a new home. Others maintain a library of plan books for loan to anyone, consumer or contractor.

MERCHANDISE DISPLAY

The second sales tool at the disposal of the retail dealer is display, and its importance in clinching sales cannot be overestimated. Proper display of merchandise performs a twofold purpose. First, it places the products in a position where a salesman may easily demonstrate and explain them. Second, merchandise arranged to best advantage in a store will inspire an amazing volume of spontaneous sales.

Modern display techniques are all pointed toward making the merchandise accessible to the trade, so people can get close to it, examine it carefully, see how much it costs. Neatness and simplicity are perhaps the two most significant factors in good display design; elaborateness or any other special features that tend to confuse the overall pattern of a sales area should be avoided.

Most manufacturers have developed scientific "point of sales" displays, posters, and other material that will help sell their products. It is a good policy to find out how this material is supposed to be set up and used, and then do it.



"My wife was always after me to remodel the bedroom, so I'm doing this to humor her!"

GET YOURSELF MORE BUSINESS by using our cartoons in your newspaper advertising. There are 104 cartoons on Remodeling, Roofing, Additions, New Homes, Etc. Mats come in 1 and 2 column sizes. Also 350 COPY SUGGESTIONS that tie-in with the cartoons on various Building items.

Everybody reads cartoons and these cartoons will really spark up your ads with humorous SELLING messages—they don't cost—they PAY. You can get the EXCLUSIVE on these 104 cartoons for your city (if still open) at small cost. Write for full information today.

LIL-AD FEATURES, RFD 3, Box 150-A
Santa Ana, Calif.

Name .....

Address .....

PERSONNEL TRAINING

The building products field is essentially technical, and it is necessary for the people who sell to be thoroughly familiar with product uses, applications, specifications, etc.

During the past ten years several universities have offered complete four year courses in light construction, and the graduates receiving their degrees from these schools are well qualified to serve in any phase of the industry. Many dealers are availing themselves of these young men, and training them to become members of their management group.

The 30 day short courses that have been conducted by regional associations during the past few years have proved an excellent way to give young employes a sound background in the fundamentals of our industry. These courses are designed to cover the essential phases of product data, applications, and methods, and the young men finishing this course are better equipped to serve the trade than they were before taking it.

In addition to the above, there are several other ways for a dealer to train his staff. One of the most popular methods, and one practiced by a large number of dealers, is by holding regular evening meetings once a week, or every other week, as the group desires.

At the meetings, a manufacturer's or jobber's representative is asked to demonstrate and explain some particular product, its use in construction, its service abilities, limitations, etc. In other words, each meeting is devoted to a subject that will help every employe, whether he be a salesman, estimator, or truck driver to have a clearer understanding of it.

Meetings of this kind are never considered as extra work by employes. Most are eager to learn and to equip themselves to do a better job; so if the meetings are interesting and informative, employes will look forward to them.

All manufacturers of building products have developed instructive catalogues and brochures about their products, which, in themselves, are authoritative texts on those items. Most are carefully illustrated and worded to give a clear, non-technical explanation of all points. A library of these pieces is a worthwhile sales tool for every organization.

The editors and publishers of AMERICAN LUMBERMAN have attempted to compile in this Dealer Products File a complete analysis of product data and information so that it will be constantly available and easily found. Through the years that it has been published, dealers have come to regard and use it as a text for employes, and as a sales tool with customers.

Most sales executives now agree that successful selling depends largely upon product knowledge, sincerity, and hard work. There are no other mysterious and rare attributes found only in scattered individuals who make good salesmen. For that reason, any employe who wants to, and who is given the opportunity to learn, can develop into a valuable salesman for an organization.

The smartest yard owners today are those who are training every employee, experienced and inexperienced, to higher standards of service instead of waiting for competition to force them into it.

The smartest outside salesmen today are those who show a genuine personal interest in all their prospects . . . the ones who leave their customers with a deep-rooted conviction that they are "service-conscious" rather than "commission-conscious."

The smartest inside salesmen are those who go out of their way to show their customers friendly, interested attention . . . are quick to give them courteous, helpful service.

If you are just taking orders for items currently in stock and turning them down on items out of stock—simply selling so many cans of paint or so many square feet of wallboard—then the public will regard you as a warehouseman, nothing more.

If you are selling the end use of your product—more attractive walls or better space-planning for example—then you are doing a creative selling job. If you are brushing up now on scientific selling methods in a buyers' market—and making the most of your advertising and merchandising aids—then, and only then, can you qualify as a super salesman ready to meet competition on any ground.

DIRECTORY OF ASSOCIATIONS

RETAIL ASSOCIATIONS

NATIONAL RETAIL LUMBER DEALERS' ASSOCIATION

302 Ring Bldg., Washington 6, D. C.
H. R. Northrup, secretary-manager

Arizona Retail Lumber & Builders Supply association: Gus R. Michaels, secretary-manager, 414 Luhrs building, Phoenix.

Arkansas Association of Lumber Dealers: E. DeMatt Henderson, secretary, 727 Pyramid building, Little Rock.

Building Material Merchants of Georgia: Joseph G. Rowell, counselor, 1050 Ponce de Leon ave., N.E., Atlanta.

Carolina Lumber & Building Supply association: E. M. Garner, secretary, 114 Builders building, Charlotte.

Central Kansas Lumbermen's association: M. L. Doner, secretary, Salina.

Central Missouri Association of Retail Lumber Dealers: Hy Guhleman, secretary, Jefferson City.

Florida Lumber & Millwork association: Mrs. Marie M. Bennett, secretary, 2218 Edgewater Drive, Orlando.

Illinois Lumber & Material Dealers' association: J. D. McCarthy, secretary, 410 S. 5th st., Springfield.

Independent Retail Lumber Dealers' association: Edwin W. Elmer, executive secretary, 303 Wesley Temple Bldg., Minneapolis.

Indiana Lumber & Builders' Supply association: Carl W. Nagle, secretary, 620 K of P building, Indianapolis 4.

Intermountain Lumber Dealers' association: C. W. Nortz, executive secretary, 712 Newhouse Bldg., Salt Lake City 1.

Iowa Retail Lumbermen's association: W. H. Badeaux, secretary, 1912 Grand Ave., Des Moines 14.

Kentucky Retail Lumber Dealers' association: Donald A. Campbell, executive vice president, Lebanon.

Louisiana Building Material Dealers' association: R. Needham Ball, secretary-manager, 528 Florida st., Baton Rouge.

Lumber & Supply Dealers' council of Georgia: J. G. Rowell, 1925 Ponce de Leon Ave. N.E., Atlanta, Ga.

Lumber Dealers' Association of Connecticut: William P. Beach, secretary, P. O. Box 1662, New Haven.

Lumber Dealers' Association of Western Pennsylvania: R. F. McCrea, secretary, Plaza building, Pittsburgh 19.

Lumber Merchants' Association of Northern California: Jack Pomeroy, executive vice president, 214 Front street, San Francisco.

Lumber Trade Association of Cook County: Phoebe B. Hess, secretary, 39 South LaSalle street, Chicago 2.

Lumbermen's Association of Texas: Gene Ebersole, executive vice president, Second National Bank building, Houston 2.

Maine, Retail Lumber Dealers' Association of: Ralph E. Jordan, secretary-treasurer, P. O. Box 236, Lewiston.

Maryland, Retail Lumber Dealers Association of: Lee J. Etelson, Lee Lumber & Supply company, Baltimore.

Massachusetts Retail Lumber Dealers' association: Willis F. Atkinson, secretary, c/o W. E. Atkinson company, Newburyport.

Michigan Retail Lumber Dealers' association: Hunter M. Gaines, secretary, 1009 Bank of Lansing building, Lansing.

Middle Atlantic Lumbermen's association: Robert A. Jones, executive vice president, 1528 Walnut St., Philadelphia 2.

Mississippi Retail Lumber Dealers' association: E. B. Lemmons, secretary, P. O. Box 1968, Jackson 115.

Montana Retail Lumbermen's association: W. J. Howard, secretary-manager, 107 E. Main, Missoula, Montana.

Mountain States Lumber Dealers' association: Joseph V. Smith, secretary-treasurer, Colorado National Bank building, Denver 2.

Nebraska Lumber Merchants' association: Phil Runion, secretary, 1026 Trust building, Lincoln 8.

New Hampshire Retail Lumbermen's association: Harold Greatorex, secretary, Meredith.

New Jersey Lumbermen's association: Edw. C. Frick, secretary, 1060 Broad street, Newark 2.

New York Lumber Trade association: Whitney F. Harris, secretary-manager, Grand Central Terminal, New York.

North Dakota Retail Lumbermen's association: Maynard A. Finch, Secy., P. O. Box 534, Fargo.

Northeast Missouri Lumbermen's association: W. C. Robinson, secretary-treasurer, Columbia.

Northeastern Retail Lumbermen's association: Paul S. Collier, secretary-manager, 339 East avenue, Valley Cadillac building, Rochester 4, N. Y.

Northern Indiana & Southern Michigan Retail Lumber Dealers' association: Robert Chamberlain, secretary, South Bend, Ind.

Northwest Missouri Retail Lumbermen's association: Elmer Ford, secretary c/o Hyde Valley Lumber company, St. Joseph, Mo.

Northwestern Lumbermen's association: W. H. Badeaux, secretary, 1013 Fourth avenue South, Minneapolis 2, Minnesota.

Ohio Association of Retail Lumber Dealers: Findley M. Torrence, secretary, Green and Market streets, Xenia, Ohio.

Oklahoma Lumbermen's association: W. M. Morgan, secretary-manager, Leonhardt Bldg., Oklahoma City.

Oregon Retail Lumbermen's association: C. A. Fariss, secretary, Western Lumber Co., 212 N. Russell St., Portland.

Rhode Island Lumber Dealers' association: J. Marshall Peters, secretary, E. E. Smith Lumber Company, Inc., Providence.

South Dakota Retail Lumbermen's association: Ralph J. McNerney, secretary-treasurer, c/o H. W. Ross Lumber Co., Sioux Falls.

Southern Missouri Retail Lumber Dealers' association: W. T. Nethery, secretary, Hayti, Mo.

Southern California Retail Lumbermen's association: Orrie W. Hamilton, executive vice president, 111 West Seventh street, Los Angeles.

Southwest Missouri Retail Lumber Dealers' association: Grover McSpadden, secretary, Springfield.

Southwestern Iowa Retail Lumbermen's association: J. Stivers, secretary-treasurer, c/o Crawford Lumber company, Council Bluffs.

Southwestern Lumbermen's association: Allan T. Flint, secretary-manager, R. A. Long building, Kansas City 6.

Tennessee Building Material association: R. O. Brownlee, secretary-manager, 711 Broadway, N.E., Knoxville 17.

Texas Line Yard Retail Lumber Dealers' association: George H. Zimmerman, secretary, Waco.

Vermont Retail Lumber Dealers' association: Walter Kangas, secretary, c/o E. R. Wiggins Builders Supplies, Chester, Vt.

Virginia Building Material association: Harris Mitchell, secretary-manager, 3303 Monument avenue, Richmond 21.

Western Retail Lumbermen's association (U.S.): W. C. Bell, director, 1319 W. Nickerson, Seattle 99, Wash.

West Virginia Lumber & Builders' Supply Dealers' association: Sam H. Diemer, secretary, Box 1589, Fairmont, W. Va.

Wisconsin Retail Lumbermen's association: H. P. McDermott, secretary, 501 Milwaukee Gas Company building, Milwaukee 2.

LUMBER MANUFACTURERS' ASSOCIATIONS

NATIONAL LUMBER MANUFACTURERS' ASSOCIATION

1319 Eighteen Street, N. W.
Washington 6, D. C.
Harry T. Kendall, chairman activities committee.

American Walnut Maunfacturers' association: Burdett Green, secretary, 666 N. Lake Shore, Chicago.

Appalachian Hardwood Manufacturers, Inc.: C. H. Clendening, secretary-manager, 414 Walnut street, Cincinnati 2.

California Redwood association: Sherman Bishop, executive vice president, 576 Sacramento street, San Francisco 11.

Carolina Virginia Lumbermen's Club: H. Wiley Sholer, secretary-treasurer, P. O. Box 623, Lenoir, N. C.

Douglas Fir Plywood association: O. Harry Shrader, managing director, Tacoma building, Tacoma 2.

Hardwood Dimension Manufacturers' association: Phillips A. Hayward, secretary-treasurer, Heyburn building, Louisville.

Indiana Hardwood Lumbermen's association: Roy C. Brundage, secretary-treasurer, West Lafayette, Ind.

Mahogany Association, Inc.: George N. Lamb, secretary-manager, 75 East Wacker drive, Chicago 1.

Maine Hardwood Manufacturers' association: Everett F. Greaton, secretary, Auburn.

Maple Flooring Manufacturers' association: Lloyd M. Clady, secretary, manager, 46 Washington Blvd., Oshkosh 2, Wis.

Michigan Sawmill Operators' association: Glenn Murray, secretary-manager, c/o Murray Brothers, Dexter, Mich.

Montana Lumber Manufacturers' association: Maurice E. Boorman, sec., Noffsinger Block, Kalispell, Mont.

National Hardwood Lumber association: J. L. Muller, acting secretary, 59 East Van Buren street, Chicago 5.

National Oak Flooring Manufacturers' association: Henry H. Willins, secretary, 814 Sterick Bldg., Memphis.

New England Lumbermen's association: D. L. Bennett, secretary, Amoskeag Bank building, Manchester, N. H.

Northeastern Lumber Manufacturers' association: R. R. Broderick, secretary, 271 Madison avenue, New York 16.

Northern Hemlock & Hardwood Manufacturers' association: O. T. Swan, secretary-manager, Oshkosh, Wis.

Northern Pine Manufacturers' association: W. A. Ellinger, secretary, 4329 Oakland Ave., Minneapolis 7, Minn.

Port Orford Cedar Lumber association: c/o B. V. Hancock, secretary, Evans Products company, Marshfield, Ore.

Southeastern Hardwood Manufacturers' Club: Ethalind McCarthy, temporary secretary, Box 448, Jacksonville 1.

Southern Cypress Manufacturers' association: J. A. Prestridge, secretary, Barnett National Bank building, Jacksonville 1.

Southern Hardwood Producers, Inc.: L. J. Heatherly, secretary-manager, Sterick building, Memphis.

Southern Pine association: H. C. Berckes, secretary-manager, P. O. Box 1170, New Orleans 4.

Southern Woodwork association: W. B. Willingham, Jr., P. O. Box 2213, Atlanta.

The Veneer association: Charles E. Close, secretary-treasurer, 616 South Michigan avenue, Chicago 5.

West Coast Lumbermen's association: H. V. Simpson, executive vice president, 1410 S. W. Morrison St., Portland 5, Ore.

West Side Hardwood Club: O. S. Robinson, secretary, Box 174, Camden, Ark.

West Side Lumber association: W. W. Findley, secretary-treasurer and manager, Little Rock.

Western Pine association: S. V. Fullaway, Jr., secretary-manager, Yeon building, Portland 4, Ore.

Western Red & Northern White Cedar association: W. H. Jones, sec.-mgr., Peyton building, Spokane 8.

WHOLESALE AND COMMISSION LUMBER ASSOCIATIONS

Associated Lumber & Allied Materials Salesmen of New Jersey (ALAMS): Milton L. Dake, secretary, 144 Milton place, South Orange.

Carolina Lumber & Material Salesmen's association: George W. French, secretary, Charlotte, N. C.

Empire State Lumber Salesmen's association: John C. Artz, secretary, 82 St. Paul street, Rochester 4, N. Y.

Long Island Salesmen's association: R. H. Delano, secretary, 126 Maple street, Great Neck, N. Y.

Michigan Association of Traveling Lumber & Sash Door Salesmen: A. C. Blixberg, secretary, 3310 Hazelwood avenue, Detroit 6.

Mississippi Valley Lumber & Sash & Door Salesmen's association: Fred B. Anderson, secretary, F. B. Anderson Lumber company, Minneapolis.

National-American Wholesale Lumber association: Sid L. Darling, secretary, 41 East 42nd street, New York.

National Association of Hardwood Wholesalers: G. A. Vangsness, secretary, 166 West Jackson boulevard, Chicago 4.

National Associations of Commission Lumber Salesmen, Inc., 4903 Delmar Blvd., St. Louis 8.

National Hardwood Lumber association: John W. McClure, secretary, 59 East Van Buren street, Chicago 5.

National Wholesale Lumber association: J. Jackson Kidd, secretary, Kidd & Buckingham Lumber company, Baltimore.

New England Wholesale Lumber association: David M. Osborne, secretary, Osborne Lumber company, Boston.

Northwestern Hardwood Lumbermen's association: A. F. Wellesley, secretary, Minneapolis.

Pacific Coast Wholesale Hardwood Distributors' association: James Davis, secretary, Davis Hardwood company, San Francisco.

Southern Wholesale Lumber association: Robert F. Darrah, McMillan Bank Bldg., Livingston, Ala.

Union Association of Lumber & Sash & Door Salesmen: R. R. Adams, secretary, 435 West Bancroft Street, Toledo, Ohio.

WOODWORKING, LOGGING AND MISCELLANEOUS LUMBER AND ALLIED ORGANIZATIONS

American Box Shook Export association, Barr building, Washington 6, D. C. C. D. Hudson, manager.

American Forest Products Industries, Inc., 1319 Eighteenth street, N.W., Washington 6, D. C. Charles A. Gillette, managing director.

American Forestry association, 919 Seventeenth street, Washington 6, D. C. L. S. Frost, executive secretary.

American Hardwood Exporters, Inc., 602 Carondelet building, New Orleans. A. E. Hegeswisch, sec.

American Veneer Package association, 2101 K street, N. W., Washington 7, D. C. Robert W. Davis, secretary-manager.

American Wood Preservers' association, 1427 Eye street, N. W., Washington 5, D. C. Horace L. Dawson, secretary.

American Wood Window Institute, Inc., 3012 Maple Ave., Dallas, Tex. Earle Racey, secretary-manager.

Arkansas Soft Pine Bureau, Boyle building, Little Rock, Ark. Robert H. Brooks, manager.

Associated Cooperage Industries of America, 408 Olive street, St. Louis 2. M. T. Rogers, secretary.

Association of State Foresters, Glen R. Durrell, sec., Oklahoma City.

Atlantic Millwork Institute, Inc., 122 E. 42nd street, New York. Clifford T. Melander, secretary-manager.

Blackfoot Forest Protective association, Charles P. Keim, secretary, Box 1167, Missoula, Mont.

California Lumbermen's Accident Prevention association, 1924 Broadway, Oakland 12, Calif. D. N. Edwards, secretary.

Cedar Chest Manufacturers of America, American Furniture Mart, 666 Lake Shore drive, Chicago 11. D. H. Caswell, secretary.

Central Committee on Lumber Standards, Washington, D. C. L. W. Smith, sec.

Douglas Fir Export company, 1125 Henry building, Seattle. L. E. Force, gen. mgr.

Eastern Woodwork Bureau, 103 Park avenue, New York. Wm. Lucas, sec.

Fir Door Institute, Tacoma building, Tacoma. John O'Hara Harte, Mgr.

Forest Farmers Association Cooperative, P. O. Box 692, Valdosta, Ga. Paul W. Schoen, executive secretary; William E. Oettmeier, president.

Hardwood Plywood Institute, 616 South Michigan avenue, Chicago 5. Charles Close, secretary.

Hickory Handle association, Hope, Ark. Guy E. Basye, sec.

Intercoastal Lumber Distributors' association, 205 East 42nd street, New York 17. E. M. Battenberg, secretary.

Intermountain Logging Conference, c/o Charles P. Keim, secretary, 447 North Higgins avenue, Missoula, Mont.

International Concatenated Order of Hoo-Hoo, 404 East Wisconsin avenue, Milwaukee. Ben F. Springer, secretary.

Lumber Manufacturers Association of Southern New England, Ansonia, Conn. Theodore L. Bristol, sec.

Michigan Sawmill Operators' association, c/o Forestry Department, Michigan State college, Lansing. Glenn D. Murray, secretary-manager.

National Association of Wood Heel Manufacturers, 191 Merrimack street, Haverhill, Mass. Arthur A. Mullins, exec. sec.

National Handle Manufacturers association, Arcola, Ill. Frank F. Collins, sec.

National Lumber Exporters association, Sterick building, Memphis. Douglas F. Heuer, secretary.

National Plywood Distributors' association: 20 N. Wacker Dr., Chicago 6, Ill. B. E. Babbitt, managing director.

National Wobden Box association, Barr building, Washington 6. D. C. C. D. Hudson, secretary.

National Woodwork Manufacturers association, 332 South Michigan avenue, Chicago 4. Ormie C. Lance, secretary-manager.

Pacific Forest Industries, Inc., Tacoma building, Tacoma. Axel H. Oxholm, managing dir.

Pacific Logging Congress, American Bank building, Portland 5, Ore. A. Whisnant, secretary.

Pacific Lumber Carriers association, 311 California street, San Francisco. Robert C. Parker, chairman.

Pacific Lumber Inspection Bureau, Inc., White-Henry-Stuart building, Seattle 1. Frank L. Rogers, secretary-manager.

Pacific Northwest Loggers association, Stuart building, Seattle 1. E. T. Clark, secretary.

Pacific Northwest Wholesale Sash & Door association, 1117 "A" street, Tacoma 1. B. G. Young, secretary.

Pacific Northwest Woodwork association, 3800 Seventh avenue, S., Seattle. E. E. Vogue, secretary.

Pencil Makers association (wood cased lead pencils), 500 Willow avenue, Hoboken, N. J. John K. Reckford, sec.

Ponderosa Pine Woodwork, 38 South Dearborn street, Chicago. D. G. Pilkington, general manager.

Prefabricated Home Manufacturers' Institute, 908 20th street N. W., Washington 6, D. C.

Railway Tie association, 610 Shell building, St. Louis 3. Roy M. Edmonds, secretary.

Red Cedar Shingle Bureau, White building, Seattle. W. W. Woodbridge, secretary-manager.

Roofer Manufacturers' association, W. R. Melton, secretary, Cuthbert, Ga.

Shook Exporters association (for wooden containers), Pekin, Ill. H. G. Herget, chairman.

Society of American Foresters, 825 Mills building, Washington, D. C. Henry E. Clepper, executive secretary.

Southeastern Box & Shook Manufacturers' association, Johnston building, Charlotte, N. C. Joseph Gall, sec.

Southern Hardwood Traffic association, Commerce Title building, Memphis. C. A. New, secretary.

Southern Pine Inspection Bureau, A. S. Boisfontaine, secretary-manager. Canal building, New Orleans 4.

Southern Plywood Manufacturers association, 728 Peachtree St., N.W., Atlanta, Ga. Clarence W. Dietterich, managing director.

Southern Sash & Door Jobbers association, Sterick building, Memphis, Tenn. Clark E. McDonald, secretary.

Southern States Forest Fire Commission, W. L. Shaddix, secretary, Double Springs, Ala.

Southern Woodwork association, P. O. Box 2213, Atlanta. W. B. Willingham, Jr., secretary.

Stained Shingle & Shake association, White Henry Stuart Bldg., Seattle 1, Wash. Ralph R. Byers, secretary-manager.

Texas Mill Managers' association, A. E. Cudlipp, secretary, Box 58, Lufkin, Tex.

Texas Millwork association, P. O. Box 1854, San Antonio. H. T. Didesch, secretary.

Upper Peninsula Timber Producers association, Lawrence P. Walsh, secretary, Ontonago, Mich.

Washington Forest Fire association, 949 Henry building, Seattle. O. Byrstrom, secretary.

Western Forest Industries association: R. T. Titus, executive secretary, Portland, Ore.

Western Forestry & Conservation association, Henry building, Seattle. Clyde S. Martin, secretary.

Willamette Valley Logging Conference, P. O. Box 929, Eugene, Ore. H. J. Cox, secretary.

Wood-For-Venetians association, 5410 Wilshire boulevard, Los Angeles 36. F. M. Binnion, secretary-manager.

Wood Hat Block Manufacturers association, 1440 Broadway, New York. Louis Mehlman, sec.

Wood Turners Service Bureau, Statler Office building, Boston 16. (Miss) Sigrid E. Swanson, executive secretary.

Wooden Box Institute, Call building, San Francisco. Jack H. Dobbin, president.

Wooden Pail & Tub association, 10 McKinley street, Keene, N. H. W. M. Barnard, exec. sec.

Woodwork Jobbers Service Bureau, 30 North La Salle street, Chicago 2. Adolph Pfund, secretary.

BUILDING MATERIALS AND ALLIED ASSOCIATIONS

Aluminum Window Manufacturers association, 74 Trinity Place, New York 6. Herbert S. Blake, Jr., secretary.

American Concrete Pipe association, 228 N. LaSalle St., Chicago. Howard F. Peckworth, managing director.

American Hardware Manufacturers' association, 342 Madison avenue, New York.

American Paper & Pulp association, 122 East 42nd street, New York. E. W. Tinker, executive secretary.

American Turpentine Farmers Association Cooperative, 108 West Hill aveniue. Valdosta, Ga. J. Lundie Smith, Jr., secretary.

American Zinc Institute, Inc., 60 East 42nd street, New York 17. Ernest V Gent, secretary.

Asbestos Cement Products association: Chester C. Kelsey, mgr., 509 Madison Ave., New York 22, N. Y.

Asphalt Roofing Industry Bureau, 2 West 45th street, New York 19. J. S. Bryant, managing director.

Asphalt Tile Institute: C. B. Whittelsey, Jr., managing director, 101 Park Ave., New York 17, N. Y.

Brick Manufacturers' Association of America, merged with Structural Clay Products Institute.

Building Material Exhibitors association, 30 North La Salle street, Chicago 2. Adolph Pfund, secretary.

Clay Products association, 100 No. LaSalle street, Chicago 2. John D. Cook, secretary.

Gypsum association: L. H. Yeager, secretary-manager, 330 So. Wells St., Chicago.

Insect Wire Screen Cloth Bureau, 74 Trinity place, New York 6. Ralph W. Bacon, secretary.

Insulation Board Institute, 111 West Washington street, Chicago 2. J. B. Blackburn, manager and secretary.

Lead Industries association: 2217 "O" St., Lincoln 8, Nebr.

Metal Lath Manufacturers' association, 636 Engineers building, Cleveland 14. Donald R. Wadle, managing director.

Metal Window Institute, 806 Rowland Road, Cheltenham, Pa. George Hingston, executive secretary.

National Association of Furniture Manufacturers, 666 Lake Shore Drive, Chicago. J. C. McCarthy, managing director.

National Building Material Distributors association, 20 N. Wacker Drive, Chicago 6, E. E. Babbitt, managing director.

National Clay Pipe Manufacturers, Inc.: 100 No. LaSalle St., Chicago 2, Ill. John D. Cook, secy.-treas.

National Clean Up & Paint Up Campaign Bureau, 1500 Rhode Island avenue, N. W. Washington, D. C. Ralph W. Emerson, executive secretary.

National Coal association, 804 Southern building, Washington 5, D. C. J. D. Battle, executive vice-president.

National Concrete Masonry association, 38 S. Dearborn St., Chicago. E. W. Dienhart, executive secretary.

National Electrical Manufacturers' association, 155 East 44th street, New York 17. W. J. Donald, managing director; George B. Cumming, general secretary.

National Glass Distributors association, 435 North Michigan avenue, Chicago 11. North Storms, secretary.

National Industrial Sand association, 1325 E St. N.W., Washington, D. C., V. P. Ahearn, executive secretary.

National Lime association, 927 Fifteenth street, N. W., Washington 5, D. C. Walter S. Stauffer, president and general manager; W. Vernon Brunbaugh, secretary.

National Mineral Wool association, 1270 Sixth Avenue, New York 20. Fred H. Sides, Jr., secretary.

National Paint, Varnish & Lacquer association, 1500 Rhode Island avenue, N. W., Washington 5, D. C. Reuel W. Elton, secretary.

National Ready Mixed Concrete association, 1325 E St., N.W., Washington, D. C., V. P. Ahearn, executive secretary.

National Sand & Gravel association, 1325 E St., N.W., Washington, D. C., V. P. Ahearn, executive secretary.

Plumbing & Heating Industries Bureau, 35 East Wacker drive, Chicago 1. Norman J. Radder, secretary.

Portland Cement association, 33 West Grand Avenue, Chicago 10, C. D. Franks, vice president.

Producers Council, Inc., 1001 15th street, N.W., Washington 5, D. C. C. M. Mortensen, managing director.

Stoker Manufacturers' association, 307 North Michigan avenue, Chicago 1. Marc G. Bluth, executive secretary.

Structural Clay Products Institute, 1520 18th street, N. W., Washington 6, D. C. J. J. Cermak, managing director.

Vermiculite Institute, 208 S. La Salle street, Chicago, Illinois.

Wall Paper Institute, 400 Madison Ave., New York 17, N. Y. W. L. Carver, secretary.

TECHNICAL AND PROFESSIONAL ASSOCIATIONS

Adhesives Manufacturers' Association of America, 441 Lexington avenue, New York. Edward J. Steiger, managing dir.

Alabama-Florida Turpentine Producers association, Bay Minette, Ala. E. Davidson, sec.

Allied Building Metal Industries, 101 Park avenue, New York. A. W. Nelson, pres.

American Box Shook Export association, 308 Barr building, Washington, D. C. C. D. Hudson, mgr.

American Concrete Institute, New Center building, Detroit 2. Harvey Whipple, sec.

American Hardware Manufacturers' association, 342 Madison avenue, New York. Charles F. Rockwell, sec.

American Institute of Real Estate Appraisers of National Association of Real Estate Boards, 22 West Monroe street, Chicago. Herbert U. Nelson, executive vice president.

American Ladder Institute, 1559 Burbank road, Wooster, Ohio. J. E. Weiser, sec.

American Leather Belting association, 108 Gold street, New York. J. Louis Nelson, sec.

American Pulpwood association, 220 East 42nd street, New York. H. E. Brinckerhoff, exec. sec.

American Society of Agricultural Engineers, Box 229, St. Joseph, Mich. Raymond Olney, sec.

American Society of Heating & Ventilating Engineers, 51 Madison avenue, New York city. A. V. Hutchinson, secretary.

American Society of Mechanical Engineers, 29 West 39th street, New York. C. E. Davies, secretary.

American Society for Testing Materials, 260 S. Broad street, Philadelphia. C. L. Warwick, sec.

American Soda Pulp Export association, 230 Park avenue, New York. C. A. Clough, sec.

American Standards association, 29 West 39th street, New York City. P. G. Agnew, secretary.

American Supply & Machinery Mfr. association, 1108 Clark building, Pittsburgh. R. Kennedy Hanson, sec.

Association of Mfrs. of Wood-Working Machinery, c/o Porter Machinery company, Grand Rapids, Mich. C. O. Porter, pres.

Barn Equipment association, Board of Trade Bldg., Chicago 4, Ill., W. Floyd Keepers, exec. secy.

Cement Institute, 111 West Washington street, Chicago 2. A. E. Hjerpe, secretary.

Eastern Wooden Box association, 80 Boylston street, Boston. C. D. Hudson, pres.

Farm Equipment Institute, 608 So. Dearborn street, Chicago 5. Robert A. Jones, sec.

Glazed Brick & Tile Institute, 1427 Eye street, Washington, D C. J. J. Cermak, sec.

National Association of Blocking Wood Manufacturers (used by photo-engravers etc.), 270 Broadway, New York. John R. Egner, sec.

National Association of Home Builders: Frank W. Cortright, executive vice president, 1737 K street N. W., Washington, D. C.

National Crushed Stone association, 1735 14th street, Washington, D. C. J. R. Boyd, admin. dir.

National Fire Protection association, 60 Batterymarch street, Boston. Percy Bugbee, general manager.

National Warm Air Heating & Air Conditioning association, 5 East Long street, Columbus, Ohio. George Boeddener, managing dir.

Pacific Coast Asphalt Shingle & Roofing Institute (mfrs.), 1151 South Broadway, Los Angeles. Sylvester L. Weaver, pres.

Pacific Coast Association of Pulp & Paper Manufacturers, Longview, Wash. R. S. Wertheimer, sec.

Plywood Package Institute, 19 West 44th street, New York. Robert D. Magill, sec.

Society of Residential Appraisers, 221 North La Salle street, Chicago. F. Hardinge, Jr., secretary.

Soda Pulp Manufacturers' association (wood pulp products), 230 Park avenue, New York. R. I. Worrell, sec.

U. S. Pulp Producers association, 122 East 42nd street, New York. Oliver M. Porter, sec.

United States Savings & Loan League, LaSalle-Wacker building, Chicago. Morton Bodfish, executive vice president.

CANADIAN LUMBER ASSOCIATIONS

British Columbia Lumber Manufacturers' association: L. R. Andrews, executive vice president, Vancouver, B. C.

British Columbia Lumber & Shingle Manufacturers' association: T. H. Wilkinson, secretary, Vancouver, B. C.

British Columbia Lumber Survey Limited: W. J. Andrew, secretary-manager, 1490 West Broadway, Vancouver, B. C.

British Columbia Truck Loggers' association: F. H. Adams, Nanaimo, B. C., secretary.

Canadian Forestry association: Robson Black, president and general manager, Montreal, Que.

Canadian Hardwood Bureau: Affiliated as part of Canadian Lumbermen's Assn.

Canadian Lumber Distributors' Bureau: Affiliated as part of Canadian Lumbermen's Assn.

Canadian Lumbermen's association: Victoria building, Ottawa, Canada. W. J. LeClair, secretary-manager.

Canadian Spruce Bureau: Affiliated as part of Canadian Lumbermen's Assn.

Consolidated Red Cedar Shingle association of British Columbia, Metropolitan building, Vancouver, B. C. G. S. Raphael, secretary-manager.

Interior British Columbia Lumber Manufacturers' association: O. S. Harris, president, Canoe, B. C.

Maritime Lumber Bureau: R. S. Cumming, secretary-manager, P. O. Box 264, Amherst, N. S.

New Brunswick Retail Lumber Dealers' association: R. S. Cummings, secretary, P. O. Box 264, Amherst, N. S.

Northern Interior Lumbermen's association: Hugh Dalton, general secretary; Vancouver, B. C.

Ontario Retail Lumber Dealers' association: Horace Boultbee, secretary-manager, 229 Yonge street, Toronto 2, Ont.

Province of Quebec Lumber Dealers & Manufacturers' association: E. H. Begin, secretary, Gatehouse building, Montreal, Que.

Quebec Province Wholesale Lumber association: Gordon D. Grimshaw, secretary, 3610 Oxenden Ave., Montreal, P. Q.

Western Lumber Manufacturers' Association of Canada: Earl C. King, secretary, Vancouver, B. C.

Western Retail Lumbermen's Association of Canada: Hector Craig, secretary, 407 Scott Block, Winnipeg, Man.

White Pine Bureau: Affiliated as part of Canadian Lumbermen's association.

Wholesale Lumber Dealers' Association of Toronto: H. J. Luck, secretary, Toronto, Ont.

Woodwork Jobbers

ALABAMA

Anniston Hdwe Co Anniston
Birmingham Sash & Door Co 901 N 28th St Birmingham
Cole Mfg Co 3901 First Av N Birmingham
Moore-Handley Hdwe Co Inc 27 S 20th St Birmingham
Wimberly and Thomas Hdwe Co 1809 First Av So Birmingham
McGowin-Lyons Hdwe & Supply Co 113 N Water St Mobile
Mc Phillips Mfg Co Inc Ft of Lawrence St Mobile
Underwood Builders Supply Co 401 So Royal St Mobile 9
Alabama Sash & Door Co Opelika
Bloch Bros Inc Selma
Allen & Jemison Co Tuscaloosa

ARIZONA

Arizona Millwork Co 712 So 23rd Av Phoenix
Arizona Sash Door & Glass Co 521 S 9th Av Phoenix
Galbraith Steel & Supply Co 1418 W Jefferson St Phoenix
Southwestern Sash & Door Co Inc Tucson & Phoenix
West Co Charles R P O Box 542 Phoenix
Arizona Sash Door & Glass Co 657 St Mary's Rd Tucson

ARKANSAS

Long-Bell Lbr Co Fort Smith
Kenney Brothers Fort Smith
Fort Smith Sash & Door Co Fort Smith
Western Door & Plywood Corp P O Box 795 Fort Smith
The Arkmo Lbr Co 1000 W Broadway P O Box 351 Little Rock
Cole Mfg Co 309 Center St Little Rock
Scott Sash & Door Co 223 Rector St Little Rock
Southland Building Products Co 400 Shall St Little Rock
Dyke Bros Fort Smith North Little Rock Texarkana
Standard Lumber Co Pine Bluff

CALIFORNIA

Walker T V & Son Inc P O Box 547 Burbank
California Door Co of Los Angeles P O Box 126 Vernon Sta Los Angeles
T M Cobb 5800 S Central Av Los Angeles & San Diego
Cole Door & Plywood Co 1049 E Slauson Ave Los Angeles
Door & Plywood Jobbers Inc 2926 Sierra Pine Av Los Angeles 23
MacDougall Door & Frame Co 10100 S Alameda St Los Angeles
Patten-Blinn Lbr Co 621 E 5th St Los Angeles
Zeesman Plywood Company 2316 S Santa Fe Av Los Angeles
California Builders Supply Co of Oakland Calif 430 40th St Oakland
Downes & Speiman 2309 Adeline St Oakland
Lincoln Lbr Co 9025 G St Oakland
Western Door & Sash Co 5th & Cypress St Oakland & Berkeley
Harbor Plywood Corp of Calif 1631 Poplar St Oakland 7
Wholesale Bldg Supply Inc 1607 32nd St Oakland 8
California Bldrs Supply Co of Oakland Calif 19th & S Sts Sacramento
Fuller W P & Co 1013 12th St Sacramento San Diego and San Francisco
Walter G Brobeck 153 Kearny St San Francisco
Harbor Plywood Corp of Calif 3095 Third St San Francisco 7
Nicolai Door Sales Co of Calif 3045 19th St San Francisco
Haley Wholesale Co Santa Barbara
Pacific Mfg Co Santa Clara
Haley Brothers 1620 14th St Santa Monica
Lumber Distributors Inc Port of Stockton Stockton

COLORADO

Building Products Jobbers Inc 1610 E 46th Ave Denver
Lindsey Lbr & Supplies 3901 York Denver 5
Lumber Yard Supply Co P O Box 4083 Denver
Denver Reserve Supply Co 901 Wazee St Denver
Sterling Lumber & Investment Co Tramway Bldg Denver
Lumber Dealers Inc P O Box 5222 Denver 17 & Pueblo

CONNECTICUT

Cleary Millwork Co Inc Ansonia
Patmore Millwork Co Inc 1240 Central Ave Bridgeport
Brockway-Smith-Haigh-Lovell Co Hamden
Rogers Sash & Door Co 189 Chestnut St New Britain & Hartford

DELAWARE

Morgan Millwork Co Inc S Market & D Sts Wilmington

DIST. OF COLUMBIA

Johnson & Wimsatt Inc 9th & Main Av SW Washington
Kern Distributing Co Inc 2640 9th St NE Washington
Wiegand Martin Inc 603 S Capitol St Washington
Harbor Sales Co Inc 4th & Bryant St NE Washington

FLORIDA

Gate City Sash & Door Co Ft Lauderdale & Miami
Baird Hardware Co Gainesville
Atlanta Oak Flooring Co P O Box 3521 Sta F Jacksonville
Fouraker Lbr Inc 2725 W Beaver St Jacksonville
Gulf States Plywood Co 2400 Walnut St Jacksonville
Harbor Plywood Corp 2335 Market St Jacksonville
Jacksonville Sash & Door Co P O Box 3154 Sta F Jacksonville 6
Huttig Sash & Door Co 2303 Market St Jacksonville & Miami
Lindsley Lumber Corp 3817 NW 17th Av Miami
Ramsey A H & Sons Inc 71 NW 11th Terr Miami
Barnhart Lbr Yard 4121 Nebraska Av Tampa 3
Knight & Wall Co P O Box 31 Tampa
Logan Lbr Co P O Box 1608 Tampa
Krauss Bros Lumber Co of Florida P O Box 961 Tampa

GEORGIA

Addison-Rudesal Inc P O Box 57 Sta D Atlanta
Atlanta Oak Flooring Co 920 Glenwood Av SE Atlanta
East Side Lumber Co 1770 DeKalb Av NE Atlanta
Harbor Plywood Corp 1161 Ridge Av SW Atlanta
Zuber Lumber Co P O Box 964 Atlanta
Augusta Lumber Co 903 8th St Augusta
Binswanger & Co Inc 951 5th St Macon
Johnson Lbr Co Box 191 Moultrie
Neal-Blun Co Montgomery at 50th St Savannah

IDAHO

W P Fuller & Co Boise
Idaho Supplies Inc Grangeville Lewiston Moscow

ILLINOIS

Acorn Wholesale Millwork Co 645 W 15th Place Chicago 7
Associated Door & Plywood Co 2141 So Throop St Chicago
Lamb Clifford E 439 E Walnut Aurora
Central Millwork Co 4920½ W Fullerton Chgo
Chicago & Riverdale Lbr Co 341 E 136 Pl Chgo
Curtis Companies Incorporated 1414 S Western Av Chicago 8
Hannapel Door & Plywood Co 525 W 76th Chgo
Harbor Plywood Corp 1444 W Cermak Rd Chgo 8
C L Ibsen Co 2139 Elston Av Chgo
F T Kartheiser Co 1911 N Harlem Ave Chicago
Knudson & Mercer Lbr Co 28 E Jackson Blvd Chicago
Melrose Mill Co 4257 Lincoln Av Chgo
Morgan Sash & Door Co 2287 Blue Island Chgo
Pacific Mutual Door Co 4900 S Merrimac Chicago 38
Plywood Distributing Co 1500 S Western Ave Chicago
Roberts Sash & Door Co 920 W Cullerton St Chgo 8
Rock Island Millwork Co., Rock Island
Roddis Co 3865 W 41st St Chicago
Salb Sash & Door 2509 W Cermak Rd Chgo
Geo J Silbernagel 8 S Michigan Ave Chicago
White Pine Sash Co 3612 W 38th St Chgo 32
Valley Mercantile Co P O Box 152 Elgin
Building Products Elkville
L. J. Keith & Son Fairfield
Wholesale Distributing Co Moline
Carr & Johnston Co 1219 S Washington St Peoria
Wahlfeld Mfg Co 1101 S Washington St Peoria
Hines Edward Lbr Co 3415 Howard Skokie
Building Materials Wholesale 920 S 9th St Springfield
Fitzpatrick James R 900 9th St Springfield

INDIANA

Hoosier Sash & Door Co Inc Anderson
Building Products Co Inc 101-109 N Elliott St Evansville
Evansville Sash & Door Co Inc 1001 Mount Auburn Rd Evansville
Stremming Raymond W Co Inc P O Box 564 Evansville
Tri-State Wholesale Sash & Door Co 1330 E Franklin St Evansville
Indiana Reserve Supply Co Inc 1009-11 Cochran St Fort Wayne
Fiddes-Moore & Co 4950 State Line Av Hammond
Adams-Rogers Co P O Box 154 Indianapolis
American Plywoods & Millwork Co 1123 W 21st St Indianapolis
Koschnick & Co Inc P O Box 1461 Indianapolis
Midland Building Industries P O Box 766 Indianapolis
Hass Wholesale Inc 3922 W Sample St South Bend

IOWA

Williams & Hunting Co 445 1st St SW Cedar Rapids
Curtis Companies Incorporated Clinton and Sioux City
Loetscher & Burch Mfg Co E 4th & Vine Sts Des Moines
National Lbr & Shingle Co P O Box 643 Des Moines
F I Products Co Fort Dodge
Fort Dodge Wholesale Distributing Co Fort Dodge
Wood Products Co 127 Utica Waterloo

KANSAS

Pacific Mutual Door Co Adams & Shawnee Sts Kansas City
Curtis Companies Incorporated 115 W Crane St Topeka
Rounds & Porter Co 430 N Waco Av Wichita
United Sash & Door Co 715 Wheeler Wichita

KENTUCKY

Central Kentucky Supply Co 750 National Av Lexington
Byron Sash & Door Co 1519 S Brook St Louisville
Huttig Sash & Door Co 1735 W Burnett Av Louisville
Louisville Sash & Door Co 1701 S 7th St Louisville
Lumbermen's Wholesale Service Inc 1423 Hemlock St Louisville
Welker Sash & Door Co Inc 410 E Burnett Av Louisville
Paducah Sash & Door Co Inc Paducah
Big Sandy Hardware Co Paintsville

LOUISIANA

Davidson Sash & Door Co Inc Alexandria and Lake Charles
Lumber Dealers Supply Co Inc P O Box 1421 Baton Rouge

Lumbermen's Supply Co Monroe
Edgar P Folse Inc E Main St New Iberia
Bacon Lbr Co P O Box 224 New Orleans
Cole Mfg Co 1740 Poydras New Orleans
Gulf States Plywood Co 781 La Salle St New Orleans
Madison Lbr Co 721 S Claiborne Av New Orleans
New Orleans Sash & Door Co Inc 1212 So Roman St New Orleans
Tulane Hdwd Lbr Co Inc P O Box 7006 Sta G New Orleans
Allen Millwork Mfg Co St Vincent Av & 63rd Shreveport

MAINE

Turgeon Bros Lewiston
Brockway-Smith-Haigh-Lovell Co 276 Commercial St Portland
Farnham H F Co 440 Commercial St Portland

MARYLAND

Harbor Sales Co Inc 1501 S Warner St Baltimore
Dealers Warehouse Supply Co Inc 90 W Oliver St Baltimore
Mears Inc John H Howard & Ostend Sts Baltimore
Morgan Millwork Co Inc 113 W North Av Baltimore
Pacific Mutual Door Co 1407 Fleet St Baltimore
Radford & Sanders Inc 612 W Pratt Baltimore
Buchanan Lbr Co Cumberland
Dixie Millwork Co Inc Hagerstown
Delmarva Sash & Door Co Inc Sudlersville

MASSACHUSETTS

Brockway-Smith-Haigh Lovell Co 465 Medford Charlestown 29 Boston
Hawkins Lumber & Warehouse Co Inc 131 State St Boston
Roddis Plywood & Door Co Inc 229 Vassar St Cambridge
New England Panel Co Everett
Richards & Davis P O Box 1007 Fall River
Gregg & Son Inc 21-31 Blandin Av Framingham
Hasting A W & Co Inc 373 Highland Av Sommerville
Newton F H Co. Inc 80 Elmwood Av Sommerville
Martin Lumber Co P O Box 386 Highland Sta Springfield
Springfield Millwork Co 177 Page Blvd Springfield
Brittain & Cannon Co Watertown
Kimball Lumber Co Watertown
Sawyer W H Lumber Co 66 Lincoln St Worcester

MICHIGAN

Kneeland-Bigelow Distrib Co P O Box 206 Bay City
Smith-Orr Co 14351 W Warren Dearborn
Continental Screen Co 1323 Book Bldg Detroit 26
Curtis Ros Co 5159 Loraine Av Detroit 8
Dealers Wholesale Supply Co Inc 12871 Eaton Av Detroit
C L Ibsen Co 5437 Hecla Ave Detroit
Kimball & Wilson Inc 2127 Fenkell Av Detroit 3
Patterson Lbr Co Inc 7411 Grand River Av Detroit
Pfaff Sash & Door Co 13333 Lyndon Av Detroit 27
Carl W Scott 12844 Greenfield Ave Detroit
Teachout Sash Door & Glass Co Brandt & Wyoming Sts Detroit 4
Union Lumber Co 7840 Dix Ave Detroit
Wholesale Lbr & Bldg Matls Inc 17509 Van Dyke Detroit 34
Wolverine Shingle & Lumber Co 14930 Linwood Av Detroit 21
Flint Sash & Door Co 2825 Davison Rd Flint & Saginaw
Grand Rapids Sash & Door Co 1453 Buchanan Av SW Grand Rapids
Porter-Hadley Co 255 Cottage Grove St SE Grand Rapids
Lumberman's Credit & Warehouse Co 628 2nd St Kalamazoo
Miller Sash & Door Co 1919 Factory St Kalamazoo
Grand Rapids Sash & Door Co 1300 Turner St Lansing
Welch Sash & Door Co Port Huron
Royal Oak Wholesale Co 216 E Harrison Royal Oak
Mershon Eddy Parker Co P O Box 36 Saginaw
Saginaw Sash & Door Co Div Saginaw Lbr Co 319 McCoskry St Saginaw

MINNESOTA

Radford Co 106 N 46th Av W P O Box 215 Duluth 1
Scott-Graff Co 2402 W Michigan St Duluth
E E Bach Millwork Co 3121 Hiawatha Minneapolis
Walter Burfeind Co 100 24th Av N Minneapolis
Carr-Cullen Co 1030 Marshall St NE Minneapolis 13
Curtis Companies Incorporated 1309 SE Fifth Minneapolis
Simons Inc 1735 S 7th St Minneapolis
The Donlin Co St Cloud
F I Products Co 331 1st Federal Bldg St Paul
Pacific Mutual Door Co 2235 Territorial Rd St Paul
Snell Sash & Door Co 1400 Selby Av St Paul

MISSISSIPPI

Morgan Wholesale Co Columbia
Hattiesburg Hdwe Stores Inc Hattiesburg
Allen Bldrs Supply Co 627 W Monument St Jackson
General Wholesale Co 934 So Gallatin Jackson
McGraw-Curran Lbr Co Inc Yazoo City

MISSOURI

Waggener Store Co Festus
Southwestern Sash & Door Co Joplin
American Sash & Door Co Benton Plaza & Bellefontaine Av Kansas City
Dyke Bros 13th St & Mulberry Kansas City and Joplin
Rust Sash & Door Co 11th & Hickory Sts Kansas City
American Sash & Door Co 8th & Monterey Av St Joseph
Fox Bros Mfg Co 2717 Sidney St St Louis
Fry-Fulton Lbr Co 148 Carroll St St Louis
Imse-Schilling Sash & Door Co 4217 Beck Av St Louis
Steele & Hibbard Lbr Co 3300 N Hall St St Louis
Theiling-Lothman Mfg Co 3810 N 9th St St Louis
Janss Lumber Co 629 E Commercial St Springfield
Southern Supply Co 505 E Olive St P O Box SS-1581 Springfield
Toombs & Company 423 N Campbell Springfield

MONTANA

W P Fuller Inc Butte and Missoula
Richland Lumber Co Glendive
Building Service Inc Great Falls Mont
Interstate Lumber Co 508 Toole Av Missoula

NEBRASKA

Curtis Companies Incorporated 501 S 7th St Lincoln
Adams & Kelly Co 1218 Nicholas St Omaha

NEVADA

Flanigan Warehouse Co 408 Eureka Av Reno

NEW HAMPSHIRE

D'Arcy Co Dover
Gregg & Son Inc Nashua

NEW JERSEY

Pacific Mutual Door Co Elizabeth
J R Quigley Co 811 Market St Gloucester City
Bosman & Casson Inc Harrison
Engler Millwork Corp 250 Culver Av Jersey City
Jersey Millwork Corp 407 Jersey Av Jersey City
C R Rudinger Inc South Kearny
Black Millwork & Lbr Co Inc Midland Park
Whittier Lbr & Millwork Co 27 Haynes Ave Newark
General Woodcraft Co Inc North Bergen
Reeb Millwork Corp Roselle
Central Jersey Wholesale Supply Co New York Av & Spruce St Trenton

NEW MEXICO

Santa Fe Builders Supply Co P O Box 899 Santa Fe also 1303 N 6th St Albuquerque
Southwestern Sash & Door Co Inc P O Box 595 Albuquerque

NEW YORK

Concord Lumber Co Inc P O Box 1297 Albany 1
General Millwork Corp 70 Fourth Av Albany
Iroquois Millwork Corp P O Box 291 Albany
Robbins Millwork Co 101 Montgomery St Albany
White Wholesale Millwork Inc Ardsley N Y
Gottfried Millwork Co 20 Garden St Brooklyn.
Melnick Co Inc J A 129 51st St Brooklyn
Parshelsky Bros Inc 131 Morgan Av Brooklyn
Buffalo Plywood Corp 1950 Elmwood Av Buffalo
Evans Lumber Co Inc 1698 Genesee St Buffalo
Iroquois Door Co 659 Exchange St Buffalo and Syracuse
Rock Island Wholesale Co 52 Leslie St Buffalo 11
Whitmer Jackson Co 367 Hamburg St Buffalo and Rochester
Marvin Millwork Inc Ellenville
Robbins Door & Sash Co Inc Ithaca
The Blount Lumber Co Oswego County Lacona
Feldman Wood Products Co 28-49 Borden Ave Long Island City N Y
Royal Glass Works Corp 50-20 25th St Long Island City N Y
American Millwork Co Nassau Terminal Rd New Hyde Park N Y
Baris (J C) Lbr Co 76 Beaver St New York
Becker-Danowitz Co Inc 56th St & Maspeth Av Maspeth
Empire Millwork Corp Northern and Willets Pt Blvd Corona
Glendale Sash & Millwork Corp 3100 Cooper Av Brooklyn
Valentine Storts & Co 136 Liberty St NYC NY
Cameron Lumber Co Inc Newburgh
Hussey-Williams Co Inc 90-15 95th Ave Ozone Park N Y
East Coast Millwork Co Inc 210-10 Jamaica Av Queens Village 8
Wood Glass Co 127 James St Syracuse
General Millwork Corp 523 Main St Utica
The Gibson Door Co Inc 1 Arnold Av Utica
Kellogg Charles C & Sons P O Box 178 Utica
Leon Corp 20 Worth St Yonkers

NORTH CAROLINA

North State Material Co P O Box 5217 Asheville
Atlanta Oak Flooring Co P O Box 2741 Charlotte
Huttig Sash & Door Co 200 E Bland St Charlotte
Harry C Yett Sash & Door Co 1230 W Morehead St Charlotte
Bingswanger & Co Inc 211 S Macon St Greensboro
Barger Millwork Co Statesville
Harris Hdwe Co Washington
Becker Builders Supply 616 Surry St Wilmington
Smith Builders Supply Inc P O Box 1427 Wilmington

NORTH DAKOTA

Builders Supply Co Bismarck and Fargo
Bardwell-Robinson Co Fargo
Minot Builders Supply Co Inc Minot and Williston

OHIO

Akron Sash & Door Co 759 S High St Akron
Brown-Graves Co 191 E Miller Ave Akron 1
The Interstate Sash & Door Co 836 Savannah Av NE Canton 4
Mahoney Sash & Door Co 1903 Mahoning Rd NE Canton 5
Tombaugh Lbr Co 215 15th St SE Canton
Acme Sash & Door Co 2nd and John St Cincinnati 2
The Cincinnati Sash & Door Co 942 W 6th Cincinnati

The Queen City Sash & Door Co Wiehe & Lostantiville Rds Cincinnati
Almas Lumber Co 10304 Miles Av Cleveland
Babin Sash & Door Co 1885 Coltman Rd Cleveland
Carver-Behan Co Union Commerce Bldg Cleveland
Great Lakes Sash & Door Co 3820 Lakeside Av Cleveland
Lumbermen's Door & Trim Co 16161 Euclid Av Cleveland 12
National Sash and Door Co Inc 10307 Detroit Av Cleveland 2
Ohio Dealers Wallboard Co 3807 King Ave Cleveland
Rock Island Wholesale Company 8800 Kinsman Rd Cleveland
Weiler-Wilhelm Lbr Co 1087 W 11th St Cleveland
Whitmer-Jackson Co 1996 W 3rd St Cleveland 13 also Youngstown
Huttig Sash & Door Co 902 W Goodale Blvd Columbus
Rae Columbus Inc 29 W Vine St Columbus
Teachout Sash Door & Glass Co 100 W Spring St Columbus
Throop-Martin Co 139 E Chestnut St Columbus
Dayton Sash & Door 8 Keowee St Dayton
Ohio City Sash & Door Co 721 Germantown St Dayton
Collier-Glasson Co P O Box 297 Sta C Toledo
Holly Reserve Supply Co Inc 3058 Monroe St Toledo
Smith Allen A Co 1216 W Bancroft St Toledo
Toledo Door & Sash Co 901 Hoag St Toledo
The Mahoney Sash & Door Co Youngstown

OKLAHOMA

Southern Bldrs Supply Co Ada
Wm Cameron & Co Altus
Lumbermen's Millwork & Supply Co Ardmore
L C Morgan Sash & Door Co Lawton
T H Rogers Lumber Co McAlester
Dyke Brothers 435 SW 9th St Oklahoma City
Kilpatrick Bros Inc P O Box 3658 Oklahoma City
The Long-Bell Lbr Co Sash & Door Div 2408 N Broadway Oklahoma City
Lumber Mills Sales Co 4112 N May Av Oklahoma City
Morgan Sash & Door Co 1100 W Noble St Oklahoma City
Neal Millwork & Supply Co 217 E Grand Av Oklahoma City
The Oklahoma Sash & Door Co P O Box 984 Oklahoma City 1
Rounds & Porter Co Inc 853 NW 2nd St Oklahoma City and Tulsa
General Sash & Door Co 810 E 9th St Tulsa

OREGON

Vollstedt-Kerr Lbr Co McMinnville
Fuller W P & Co Inc P O Box 4170 Portland
Gilbert Hawley Co 433 N Thompson St Portland
Lausmann J H Co 2289 N Interstate Av Portland
Lumber Products 2116 NW 20th Av Portland 9
Western Door & Plywood Co 900 SW 2nd Av Portland

PENNSYLVANIA

Reeb Millwork Corp 61 W LeHigh Av Bethlehem
Soult Lbr Co Clearfield
Quigley Co J R Inc Cressona
Lyman Felheim Co 2010 Holland St Erie
Delmarva Sash & Door Co Inc 418 S Mill St Lancaster
Ashenfelter & Son Inc W C Penn Treaty Park Philadelphia 25
Derr Wm H Co 1619 N American St Philadelphia
Lumico Sales Co 927 N Front St Philadelphia
Adelman Lbr Co 908 2nd Av Pittsburgh 19
Georgia-Pacific Plywood Co 33rd St & Liberty Av Pittsburgh 1
Iron City Sash & Door Co 140 S 26th St Pittsburgh
Epstein N B Co Jefferson Av & Ash St Scranton
Robbins Door & Sash Co 301 Green Ridge St Scranton Shenandoah and Williamsport

RHODE ISLAND

Grimwood Co H A 1163 Westminster St Providence

SOUTH CAROLINA

Binswanger & Co Inc Florence
Dealers Supply Co 420 W McBee Av Greenville
Southern Sash & Door Co 123 E Court St Greenville
Palmetto Sash & Door Co 351-355 Langston Av Orangeburg

SOUTH DAKOTA

Dakota Sash & Door Co Aberdeen
Farley-Loetscher Co 701 E 8th St Sioux Falls
Watertown Sash & Door Co P O Box 745 Watertown

TENNESSEE

Schidegger Woodwork Supply Co 2704 E 28th St Chattanooga
Summers Hdwe & Supply Co Johnson City
Chandler & Co Inc 426 W Depot Av Knoxville
House-Hassen Hdwe Co Inc 759 Western Av Knoxville
Huttig Sash & Door Co 900 N 6th Av Knoxville
McClung C M & Co Inc 501 Jackson Av Knoxville
Central Woodwork Inc P O Box 3807 Memphis
Cole Mfg Co 789 S 4th St Memphis
Dyke Bros 91 W Virginia Av Memphis
Fischer Lime & Cement Co Linden Av & Walnut St Memphis
Memphis Sash & Door Co Box 437 Memphis
Beasley & Sons Co 147 3rd Av N Nashville
Chilton J E Millwork & Lbr Co 512 27th Av N Nashville
Nashville Sash & Door Co 152 2nd Av N Nashville 3
Warren Brothers Co P O Box 1101 Nashville

TEXAS

Wm Cameron & Co Inc Abilene Austin Beaumont Corpus Christi Fort Worth Harlingen Houston Lubbock Lufkin Odessa San Angelo San Antonio Tyler Waco and Wichita Falls
Amarillo Sash & Door Co P O Box 870 Amarillo
Lamb Sash & Door Co 1023 W 4th St Amarillo
United Sash & Door Co 106 Houston St Amarillo
Davidson Sash & Door Co 500 San Marcos Austin
Steves Sash & Door Co 2506 North Port Corpus Christi
Buell & Company 2439 Swiss Ave Dallas
Clem Lbr Co 2500 Live Oak Dallas
Huttig Sash & Door of Texas 6519 Cedar Springs Dallas
Lyon-Gray Lumber Co Wholesale Dept 1305 Commerce St Dallas
Moore & Company 309 S Market St Dallas
Crawford Mfg Co 1630 E Missouri St El Paso
Galbraith Steel & Supply Co 2015 Mills El Paso Lubbock and Pecos
Southwestern Sash & Door Co P O Box 1919 El Paso
Ft Worth Sash & Door Co 400 S Lake St Ft Worth
Sloan Lbr Co 201-9 W Vickrey Blvd P O Box 831 Ft Worth
Texas Sash & Door Co 201 Rupert St Ft Worth
Southmost Sash & Door Co Harlingen
Detering Co 3028 Washington Av Houston
Dyke Sash & Glass Co 208 Jensen Dr Houston
Houston Sash & Door Co 813 McKee St Houston
Steves Sash & Door Co 3619 Commerce St Houston and San Antonio
Vaughan Geo C & Sons Scanlon Bldg Houston and San Antonio
Galbraith Steel & Supply Co P O Box 1656 Lubbock Marfa Pecos
Lubbock Sash & Door Co Lubbock
Lyon-Gray Lbr Co Paris
Grayson Millwork & Supply Co P O Box 1 Sherman
Sweetwater Sash & Door Co Sweetwater
C D Shamburger Jr Supply Co Wichita Falls

VIRGINIA

Building Supplies Corp P O Box 477 Norfolk
Binswanger & Co Inc 3300 W Leigh St Richmond also Danville
Sash Door & Glass Corp 6th & Stockton Sts Richmond
Huttig Sash & Door Co 1800 Campbell Av SW Roanoke
Beamon's Inc P O Box 512 Suffolk

WASHINGTON

Savage Lbr & Mfg Co Renton
Fuller W P & Co Fairview Av N & Roy St Seattle Spokane Tacoma Wala and Yakima
Puget Supply Co P O Box 1844 Seattle 11
Lundgren Dealers Supply Inc 440 E 25th St Tacoma
Pacific Mutual Door Co P O Box 1589 Tacoma
Tacoma Sash & Door Co Lincoln Av nr Taylor Way Tacoma

WEST VIRGINIA

Bluefield Sash & Door Co Inc Bluefield
Carolina Lumber Co 204 21st Huntington
Smith W H Hardware Co 119 3rd St Parkersburg
Martin & Jones Inc Ronceverte
Wilson W A & Sons Inc 1409 Main Wheeling

WISCONSIN

Wisco Hardware Co 15 S Brearly St Madison
Burmeister Woodwork Co 3135 W Forest Home Av Milwaukee
Marquart Millwork Co 50 Ceape St Oshkosh
Morgan Co of Wisconsin 520 Oregon St Oshkosh
The Radford Company 40 Wisconsin Av Oshkosh
Racine Millwork & Supply Co 18th & Clark St Racine
Wilbur Lbr Co Waukesha
Curtis Companies Incorporated Wausau
Wilbur Lbr Co P O Box 2531 West Allis

Wholesalers of Building Materials

ALABAMA

Birmingham Sash & Door Co 901 N 28th St Birmingham
Underwood Builders Supply Co 401 S Royal St P O Box 1587 Mobile 9
Alabama Sash & Door Co Opelika

ARIZONA

Galbraith Steel & Supply Co 1418 W Jefferson St Phoenix
Mallco Distributors 312 So 11th St P O Box 3916 Phoenix
Southwest Co-op Wholesale 1821 E Jackson St Phoenix
Southwestern Sash & Door Co Inc PO Box 6125 Phoenix and Tucson

ARKANSAS

Dyke Bros Fort Smith North Little Rock and Texarkana
Mallory Building Material Co Cantrell at Riverside Route No 5 Little Rock
May Supply Co P O Box 306 Little Rock
The Arkmo Lbr Co 1000 West Broadway P O Box 351 Little Rock

CALIFORNIA

Canfield Perry E 211 S Lake Burbank
Mathews & De Haven Inc P O Box 9 Fresno
Building Material Distributors Inc 1855 Cherry Av Fresno also P O Box 1929 Stockton
Accepted Materials Co 9151 Exposition Dr Los Angeles

Downes & Speiman 2309 Adeline St Oakland
Wholesale Bldg Supply Inc 1607 32nd St Oakland
California Builders Supply Co of Oakland 430 40th St Oakland Fresno and Sacramento
Reserve Warehouse Inc Oceanside
Golden State Flooring Co 375 Rhode Island St San Francisco
Haley Wholesale Co Santa Barbara

COLORADO

Building Products Jobbers Inc 1610 E 46th Av Denver 16
Denver Reserve Supply Co 901 Wazee St Denver
Gittings Lumber Co 4501 Wynkoop St P O Box 6772 Denver
Hallack & Howard Lbr Co 7th & Larimer Sts Denver
Lindsey Lbr & Supplies 3901 York St Denver 5
Lumber Dealers Inc P O Box 5222 Denver 17 and Pueblo
Sterling Lbr & Investment Co Tramway Bldg Denver

CONNECTICUT

Cleary Millwork Co Inc Ansonia
City Lbr Co of Bridgeport Inc 75 Third St Bridgeport 1
Tri-State Reserve Supply Corp Salisbury
Phillips Building Products Inc 26 Sixth St Stamford

DIST. OF COLUMBIA

Kern Distributing Co 2640 9th St NE Washington

FLORIDA

Gate City Sash & Door Co Ft Lauderdale and Miami
Stringfellow Supply Co Gainesville
Calvit Howell & Co Lynch Bldg Jacksonville
Fouraker Lbr Co 2725 W Beaver St Jacksonville
Gulf States Plywood Co 2400 Walnut St Jacksonville
Bailey's Lbr Yard Inc 1635 NW 28th St Miami
Lindsley Lbr Corp 3817 NW 17th Av Miami
Florida Plywood Service 77 N W 72nd St Miami
Hurricane Sales Co P O Box 1285 Miami
Huttig Sash & Door Co P O Box 205 Buena Vista Sta Miami
Timber Products Co P O Box 2413 Orlando
Booker & Company Inc P O Box 2410 Tampa
Knight & Wall Co P O Box 31 Tampa
Logan Lbr Co P O Box 1608 Tampa

GEORGIA

Carolina Lbr & Supply Co 194 Moore S E Atlanta
East Side Lumber Co 1770 DeKalb Ave N E Atlanta
Neal-Blun Co Montgomery at 50th St Savannah

IDAHO

Atkinson Reilly Co Inc 705 So 8th St Boise
Continental Lumber Co Boise
J G Doerr Box 1900 Boise
Idaho Supplies Inc Grangeville Lewiston and Moscow
Morrison-Merrill & Co Inc P O Box 1047 Pocatello
Knudsen Builders Supply Co Pocatello

ILLINOIS

Alexander Warehouse & Sales Co 105 W Adams St Chicago also Aurora Joliet and Urbana
Chicago & Riverdale Lbr Co 341 E 136 Pl Chgo
General Roofing & Supply Co 5918 S Ashland Ave Chicago
Clonick Steel Co 2375 S Archer Ave Chicago
Edward Hines Lbr Co 77 W Washington St Chgo and Skokie
Reserve Supply Corp of Chicago 1529 S Jefferson Chicago
Selck & Co Walter E 225 W Hubbard St Chicago 10
Interstate Wholesale Inc 1100 W Washington St East Peoria
East Side Lumberyard Supply Co 726 Brady Av East St Louis
Valley Mercantile Co P O Box 152 Elgin
Southern Wholesale Lbr Co Fairfield
Lumber Dealers Supply Co Libertyville
Heyer Sales Co Milledgeville
Rock Island Wholesale Co Rock Island
State Line Builders Supply Co South Beloit
B H M Building Matls Inc 1528 N 11th St Springfield
Building Materials Wholesale 920 S 9th St Springfield
Washington Supply Co Washington

INDIANA

Hoosier Sash & Door Co Inc Anderson
Building Products Co Inc 101-109 N Elliott St Evansville
Stremming Raymond W Co Inc P O Box 564 Evansville
Indiana Wholesalers Inc 221 East Illinois St Evansville
Curdes Lumber Co Inc 1123 Wells St Ft Wayne 7
Ft Wayne Dealers Wholesale Supply Inc 916 E Michigan St
Great Lakes Distributing Corp Maumee Av at Bueter Rd Ft Wayne 1
Inland Distributing Corp 218-24 E Murray St Ft Wayne
Indiana Reserve Supply Co 1009-11 Cochran St Ft Wayne
Michigan Wholesalers Inc P O Box 536 Fort Wayne
Carter-Lee Lbr Co 1621 W Washington St Indianapolis
Dealers Wholesale Supply Inc 916 E Michigan St Indianapolis
Lumberman's Wholesale Supply Corp 1002 E 25th St Indianapolis
Midland Building Industries Inc 907 East Michigan St Indianapolis 6 Ind
Eagle Lbr Dealer Supply Co 1450 N Washington St Marion
Great Lakes Distributing Corp 212 W Ewing South Bend 14
Hass Wholesale Inc 3922 W Sample St South Bend
Wabash Valley Lbr & Supply Co Inc 1104 Ash St Terre Haute

IOWA

Lumbermen's Associated Buyers Co Inc 1204 9th SW Cedar Rapids and Des Moines
Central States Steel Inc 2935 Rockingham Davenport
Tip-Top Distributing Co 1211 9th SW Cedar Rapids Des Moines and Storm Lake
Ashton Wholesale Service 121 S W 5th St Des Moines 9
Wheeler Lbr Bridge & Supply Co P O Box 1321 2260 Flyer Av Des Moines 9
Williams & Hunting Co 445 1st St SW Cedar Rapids
Joyce Wholesale Co 21st St & 2nd Av Council Bluffs
Ashton Wholesale Service 121 SW 5th St Des Moines 9
Loetscher & Burch Mfg Co E 4th & Vine Sts Des Moines
Queal Distributing Co E 4th & Grand Av Des Moines
F I Products Co Fort Dodge
Fort Dodge Wholesale Distributing Co Ft Dodge
Interstate Wholesale Inc P O Box 242 Ft Madison
The Fonda F Rock Company 1627 E 4th St Sioux City
Hawkeye Building Supply Co 2210 E 4th St Sioux City 1
Thos Mould Lbr Co P O Box 715 Sioux City
Wood Products Co 127 Utica Waterloo

KANSAS

White L J Lbr Co Inc Hutchinson
Lumber Dealers Service Co 4th & Mission Rd Kansas City
Stark W P Lumber Co Inc Fairfax Rd & Quindaro Blvd Kansas City
Martin T F Lbr Co 519 Jackson St Topeka
Rock Island Wholesale Co 313 S St Francis St Wichita 2
Wichita Bldg Material Co Inc 414 S Commerce St Wichita

KENTUCKY

Bass & Co State St Bowling Green also Owensboro Paducah Hopkinsville
Central Kentucky Supply Co 750 National Av Lexington
Lumber Dealers Supply Co Inc 330½ Georgetown St Lexington
Lumbermen's Wholesale Service Inc 1423 Hemlock St Louisville
Mutual Service Co Inc 435 E Burnett Av Louisville

LOUISIANA

Lumber Dealers Supply Co Inc P O Box 1421 Baton Rouge
Dealers Supply Co Inc 2928 Louisville Av P O Box 1863 Monroe
The Lumbermans Supply Co Monroe
Madison Lumber Co 721 S Claiborne Av New Orleans
Tulane Hardwood Lbr Co Inc P O Box 7006 Station G New Orleans 19
Allen Millwork Mfg Co St Vincent Av & 63rd St Shreveport
Central Wholesale Co Inc P O Box 1217 Shreveport

MARYLAND

Roberts Company 108 South Howard St Baltimore

MASSACHUSETTS

Hawkins Lbr & Warehouse Co 131 State St Boston
Elhide Co 130 6th St Cambridge
Gilfoy Distributing Co 640 Main St Cambridge
Connecticut Valley Reserve Supply Co 146 Chestnut St Springfield
Diamond Match Co Wholesale Lbr Div South Walpole

MICHIGAN

Wholesale Distributors Co P O Box 351 Ann Arbor
Baker Wholesale Co Battle Creek
Kneeland-Bigelow Distributing Co P O Box 206 Bay City
Central Bldrs Supplies Co Burr Oak
Cadillac Wholesale Supply Co Cadillac
Cloverland Supply Co 300 Crystal Av Crystal Falls
Dealers Wholesale Supply Inc 12871 Eaton Av Detroit
Presto Trims Inc 3560 St Albin Detroit
Wholesale Lbr & Bldg Materials Inc 17509 Van Dyke Detroit 34
Flint Sash & Door Co Inc 2825 Davison Rd Flint
Evans & Retting Lbr Co 707 Wealthy St SW Grand Rapids
Grand Rapids Reserve Supply Co 131 Wealthy St SW Grand Rapids
Presto Grand Rapids 48 Logan SW Grand Rapids
Western Mich Bldg Matl & Supply 47 Scribner Av NW Grand Rapids 4
Porter-Hadley Co 255 Cottage Grove St SE Grand Rapids
Hamar-Quandt Co Houghton
Consolidated Fuel & Lumber Co Ishpeming
Michigan Wholesalers Inc P O Box 530 Jackson
Lumbermens Credit & Warehouse Co 628 Second St Kalamazoo
Wholesale Lbr Products Co Muskegon
Saginaw Sash & Door Div Saginaw Lbr Co 319 McCoskry St Saginaw
Midwest Bldg Distrs Inc St Louis

MINNESOTA

Woodruff Lbr Co 817 Garfield Av Duluth
W E Gorman Co 836 Plymouth Bldg 6th & Hennepin Minneapolis 3
Minneapolis Builders Supply Co 927 Second Av So Minneapolis
Northwest Supplies Co 14th Av & Van Buren St NE Minneapolis
F I Products Co 331 1st Federal Bldg St Paul
Reserve Supply Co 2570 Ellis Av St Paul
Rock Island Wholesale Co 1st Nat Bk Bldg St Paul

MISSISSIPPI

Lumbermens Supply Co 230 Thompson St Jackson
Standard Millwork & Supply Co Inc P O Box 1005 2000 N Mill Jackson
Delta Bldg Matl Co Leland

MISSOURI

Cape Supply Co 14 S Frederick St Cape Girardeau
Four States Supply Co 100 River St Carthage
J C Williamson Dexter
Waggener Store Co Festus
Missouri Lumber Dealers Reserve Inc Jefferson City
Southwestern Sash & Door Co Joplin
Badger Lumber Co Inc 559 Westport Rd Kansas City
Dyke Bros 13th St & Mulberry Av Kansas City & Joplin
Lumbermen's Supply Co P O Box 354 Kansas City
Timberline Inc 900 E 18th St Kansas City 8
Lebanon Wholesale Materials Co Lebanon

Saint Joseph Bldrs Supply Co 4th & Mitchell St Joseph
Lumberyard Supply Co 5060 Manchester Ave St Louis 10
Toombs & Company 423 N Campbell Springfield

MONTANA

Lumber Dealers Inc Billings
Western Builders Supply Inc 1510 Montana Av Billings

NEBRASKA

Central Lbr Sales Co 600 N 17th St Lincoln
Chicago Lumber Co of Omaha 1324 Pierce St Omaha
Joyce Wholesale Co 1208 W O W Bldg Omaha
Lumbermen's Brick & Supply Co 900 S 15th St Omaha

NEVADA

Flanigan Warehouse Co 408 Eureka Av Reno

NEW HAMPSHIRE

Diamond Match Co Dover

NEW MEXICO

New Mexico Co P O Box 895 Albuquerque
Southwestern Sash & Door Co Inc P O Box 595 Albuquerque
Santa Fe Bldrs Sup Co P O Box 899 Santa Fe also 1803 N 6th St Albuquerque

NEW YORK

United Metals 232 Niagara St Buffalo
American Millwork Co Nassau Terminal Rd New Hyde Park L I
Concord Lumber Co Inc P O Box 1297 Albany 1
Wholesale Service Supply Co Railroad Av Albany and Utica
Diamond Match Co 122 E 42nd St New York
D Brown Co Inc Broad Hollow Rd Farmingdale L I N Y

NORTH CAROLINA

North State Material Co P O Box 5217 Asheville
Smith Bldrs Supply Inc P O Box 1427 Wilmington

NORTH DAKOTA

Builders Supply Co Bismarck
Minot Bldrs Supply Co Minot

OHIO

Ashtabula County Wholesale Lbr Co Ashtabula
Athens Flooring Co 35 Elliott St Athens
Industrial Wholesale Lbr Co 4300 E 68th St Cleveland
Ohio Dealers Wallboard Co 3807 King Av Cleveland 14
Rae Columbus Inc 29 W Vine St Columbus
Michigan Wholesalers Inc P O Box 8 Toledo 14
Rae Bldg Matls 1301 Prouty Av Toledo
Reserve Supply Co P O Box 827 Warren
Hearn Paper Company 337 West Commerce St Youngstown
Union Wholesale Lbr Co 1671 Cherry St Youngstown

OKLAHOMA

Wm Cameron & Co Inc Altus
Lumber Mills Sales Co 4112 N May St Oklahoma City
Lumbermens Supply Co 1530 W Main P O Box 587 Oklahoma City
Barney Stewart Wholesale Bldrs Supplies Inc 910 N Walker Oklahoma City
Neal Millwork & Supply Co 217 E Grand Av Oklahoma City
General Sash & Door Co 810 E 9th St Tulsa

OREGON

City Lbr & Supply Co Astoria
Twin Oaks Bldrs Supply Co 669 High St Eugene
Bevil & Co 80 SE Madison St Portland
Lumber Products 2116 NW 20th Av Portland 9
Chas E Sand Plywood Co 1106 NW 16th Av Portland 9
Wanke Panel Company 2204 N Clark Ave Portland 12
Casey Co Inc Don 207 SE Clay St Portland
Gilbert Hawley Co 433 N Thompson St Portland
Howard Teel 6115 NE Fremont St Portland 13
Lamb-Schrader Co P O Box 31 Tillamook

PENNSYLVANIA

Soult Lbr Co Clearfield Pa
M L Claster & Sons Lock Haven
Philadelphia Reserve Supply Co Luzerne & F Sts Philadelphia
J R Quigley Co 1290 S Cameron St Harrisburg Also Cressona Lancaster Philadelphia
United Metals 160 No 22nd St Philadelphia
Stirling Lbr 500 Brushton Ave Pittsburgh
Hal Keely Plywood Co 2001 Preble Av Pittsburgh 33
Wholesale Distributing Co 36th St and A V R R Pittsburgh 1
Robbins Door & Sash Co 301 Green Ridge St Scranton 9

SOUTH CAROLINA

Binswanger & Co Inc 1800 Laurel St Columbia also Florence
Piedmont Wholesale Co P O Box 385 Greenville

SOUTH DAKOTA

Jordan Millwork Co Sioux Falls
Lumbermen's Supply Co 617 E 7th St Sioux Falls
Knechts' Wholesale Lumbermens Supply Rapid City

TENNESSEE

Dyke Bros 91 W Virginia Ave Memphis
Dealers Supply Co 23rd Av N Nashville
Bass & Co P O Box 568 Nashville
Fischer Lime & Cement Co Linden Av & Walnut St Memphis

TEXAS

Wm Cameron & Co Inc Abilene Austin Beaumont Corpus Christi Fort Worth Harlingen Houston Lubbock Lufkin Odessa San Angelo San Antonio Tyler Waco and Wichita Falls
Buell & Company 2439 Swiss Av Dallas
Moore & Co 309 S Market St Dallas 2
Huttig Sash & Door Co of Texas 6615 Cedar Springs Dallas
Lyon-Gray Lbr Co Wholesale Dept 1305 Commerce St Dallas and Paris
Galbraith Steel & Supply Co 2015 Mills El Paso Lubbock Marfa Pecos and San Angelo
Southwestern Sash & Door Co Inc P O Box 1919 El Paso
Cooley G C Wholesale Lbr & Bldg Matl Co 2401 E Lancaster Av Ft Worth
Dyke Sash & Glass Co 208 Jensen Dr Houston
Vaughan Geo C & Sons Scanlon Bldg Houston Nederland and San Antonio
Nash Robinson & Co Inc 1600 Franklin Av Waco
C D Shamburger Jr Supply Co Witchita Falls

UTAH

Frank R W & Co Inc 118 S 5th W St Salt Lake City
Lumber Dealers Supply 1116 Cont Bank Bldg Salt Lake City
Morrison-Merrill & Co 3rd W & 1st North Salt Lake City 11

VIRGINIA

Bristol Builders Supply Co Bristol
Mingo Lime & Lbr Co Grundy

WASHINGTON

Stouffer-Bowman Co Aberdeen
Dealers Warehouse Inc 1322 Vance Bldg Seattle 1
Palmer G Lewis Co Inc 2 Hanford St Seattle 4
Lockwood Warehouse Corp 2823 Western Ave Seattle
Lumber Supply & Warehouse Co 531 Elliott Ave W Seattle
Puget Supply Co P O Box 1844 Seattle 11
Building Supplies Inc N 528 Cedar St Spokane
Exchange Lbr & Mfg Co P O Box 1511 Spokane
Idaho Supplies Inc 310 Peyton Bldg Spokane 8
Lumbermen's Supply Corp E 3002 Mission Av Spokane
Lungren Dealers Supply Inc 440 E 25th St Tacoma

WEST VIRGINIA

The Meadow River Lumber Co Rainelle
Seabright H L Co 43rd & McColloch Sts Wheeling
Wilson W A & Sons Co 1409 Main Wheeling

WISCONSIN

Schraunfnagel Wholesale Inc 1026 S Broadway Green Bay
Lumber Dealers Supply Inc 1040 S Broadway Green Bay
Wisconsin Wholesalers Inc P O Box 389 Green Bay
Lumbermen's Supply Co 210 S Baldwin St Madison
Marshfield Milling Company 211 West Second St Marshfield
Milwaukee Plywood Company 1227 W Bruce St Milwaukee 4
Norcraft Co 134 E Juneau St Milwaukee
Wisconsin's Transfer Yard 25 High St Oshkosh
Falls Dealer Supply Co Sheboygan Falls

Plywood Distributors

ALABAMA

Moore Frank E Lbr Co Inc 1st Natl Bldg Birmingham
United Plywoods Corp 1220 2nd Av N Birmingham
U S-Mengel Plywoods Inc 1230 Second Av Birmingham

ARIZONA

Wood E K Lbr Co 724 Title & Trust Bldg Phoenix
Arizona Sash Door & Glass Co 521 S 9th Ave P O Box 1069 Phoenix
West Charles R Co P O Box 542 Phoenix
Arizona Sash Door & Glass Co 657 St Mary's Rd Tucson

ARKANSAS

Long-Bell Lbr Co 322 Wheeler St Ft Smith
Dyke Bros 309 Center St Little Rock Also Ft Smith and Texarkana
Western Door & Plywood Corp P O Box 795 Fort Smith
Southland Bldg Products Co 400 Shall St Little Rock
May Supply Co P O Box 306 Little Rock
Standard Lumber Co Pine Bluff

CALIFORNIA

Mathews & DeHaven Inc P O Box 9 Fresno 7
Barto Ralph E Lbr Co P O Box 266 Huntington Park
California Builders Supply Co 3180 Hamilton Ave Fresno Also Sacramento Oakland
Allied Veneer & Lbr Co 5100 S Boyle Los Angeles
Angeles Plywood Co 1051 E Slauson Ave Los Angeles
Martin Plywood Co 5816 S Main St Los Angeles
Accepted Materials Co 9151 Exposition Dr Los Angeles 34
Back Panel Co 314 E 32nd St Los Angeles
California Panel & Veneer Co 955 S Alameda St Los Angeles
Davidson Plywood & Lbr Co 3136 E Washington Blvd Los Angeles
United States Plywood Corp 1930 E 15th St Los Angeles
Wood E K Lumber Co P O Box 3161 Terminal Annex Los Angeles
Bohnhoff Lbr Co Inc 1500 S Alameda St Los Angeles
California Door Co of Los Angeles P O Box 216 Vernon Sta Los Angeles
R W Dalton & Co 307 S Hill St Los Angeles
Door & Plywood Jobbers Inc 2926 Sierra Pine Av Los Angeles 23

Eckstrom Plywood & Door Co 2719 S Compton Av Los Angeles 11
MacDougal Door & Frame Co 10100 S Alameda St Los Angeles
Vernon Building Supply Co 2310½ W Vernon Ave Los Angeles
Western Hardwood Lumber Co P O Box 5008 Metropolitan Station Los Angeles
Cobb T M Co 5800 S Central Ave Los Angeles
Cole Door & Plywood Co 1049 E Slauson Ave Los Angeles 11
Ray Hill Lumber Co 2510 Hyde Park Blvd Los Angeles
Roddis California Inc 2620 E Vernon Av Los Angeles 58
Simpson Logging Co 1610 E Washington Blvd Los Angeles 21
Stanton E J & Son Inc P O Box 3816 Terminal Annex Los Angeles
Wood Earl F 4200 Bandini Blvd Los Angeles 23
Zeesman Plywood Co 2316 S Santa Fe Av Los Angeles
California Bldrs Supply Co of Oakland 430 40th St Oakland 9
Strable Hardwood Co 537 First St Oakland 7
United States Plywood Corp 570 3rd St Oakland
California Plywood Inc 1403 Fifth St Oakland
Western Door & Sash Co 5th & Cypress St Oakland also Berkeley
United States Plywood Corp 330 Brush St P O Box 1347 Oakland 7
Reserve Warehouse Inc 323 N Cleveland St Oceanside
Frost Hardwood Lumber Co 347 W Market St San Diego
M Herrmann Co 844 West G St San Diego
Davidson Plywood & Lbr Co 1930 Carroll Av San Francisco 24
Higgins J E Lumber Co 99 Bay Shore Blvd San Francisco
Nicolai Door Sales Co 3045 19th St San Francisco
Davis Hardwood Corp 757 Beach St San Francisco 9
Gamerston & Green Lbr Co Foot of Tunnel Ave San Francisco
Harbor Plywood Corp of Calif 3095 Third St San Francisco 7
Roddiscraft Inc 345 Williams Av San Francisco 24
San Francisco Plywood Co 725 Second At Townsend San Francisco
United States Plywood Corp 1100 Army St San Francisco
Wendling-Nathan Co 564 Market St San Francisco 4 Calif
White Brothers 2150 Oakdale Av San Francisco 24
Haley Wholesale Co Santa Barbara
Anderson Plywood Co 2100 Colorado Ave Santa Monica
Lumber Distributors Inc Port of Stockton Stockton
Building Material Distributors Inc P O Box 1929 Stockton

COLORADO

Denver Reserve Supply Co 901 Wazee St Denver 2
Building Products Jobbers Inc 1610 E 46th Av Denver
Hallack & Howard Lbr Co 7th & Larimer Denver
Sterling Lbr & Inv Co 302 Tramway Blvd Denver 2
Lumber Dealers Inc P O Box 5222 Denver

CONNECTICUT

Sanford Lbr Sales Inc Hamden
Blick Plywood Co T C 363 Park Av East Hartford
Guernsey-Westbrook Co 750 Main St Hartford

DISTRICT OF COLUMBIA

Harbor Sales Co Inc 4th & Bryant Sts NE Washington 2
Kern Distributing Co 2640 Ninth St N E Washington
Martin Wiegand Inc 603 S Capitol St Washington

FLORIDA

Gate City Sash & Door Co 15 S W 3rd Ave Fort Lauderdale
Forest Products Corp P O Box 1341 Fort Lauderdale
Stringfellow Supply Co Gainesville
Fouraker Lumber Co 2725 W Beaver St Jacksonville
Gulf States Plywood Co 2400 Walnut St Jacksonville
Harbor Plywood Corp 2335 Market St Jacksonville 6
Jacksonville Sash & Door Co Inc P O Box 3154 Sta F Jacksonville
U S Mengel Plywoods Inc P O Box 3256 Station F Jacksonville Also Cypress & Rome Sts Tampa
Florida Plywood Service 77 N W 72nd St Miami
Ramsey A H and Sons Inc 71 N W 11th Ter Miami
Logan Lumber Co 253 N W 22nd St Miami Also Tampa
Krauss Bros Lbr Co of Fla P O Box 961 Tampa
Harbor Plywood Corp 802 N Rome Av Tampa
Booker & Co Inc P O Box 2410 Tampa 1
Knight & Wall Co P O Box 31 Tampa

GEORGIA

Atlanta Oak Flooring Co 920 Glenwood Ave S E Atlanta
Dixie Plywood of Atlanta Inc P O Box 82 Sta C Atlanta
Harbor Plywood Corp 1161 Ridge Ave S W Atlanta 3
U S Mengel-Plywoods Inc 954 Ashby St NW Atlanta
Southern Wood Products Co P O Box 3220 Sta F Atlanta
Zuber Lbr Co P O Box 964 Atlanta
Binswanger & Co Inc 951 5th St Macon
Neal-Blun Co Montgomery at 50th St Savannah

IDAHO

Continental Lbr Co Boise
Doerr J G Box 1900 Boise also Twin Falls
Reilly Atkinson & Co Inc 705 So 8th St Boise

ILLINOIS

Aetna Plywood & Veneer 1732 North Elston Av Chicago 22
Chicago & Riverdale Lbr Co 341 E 136th Pl Chicago 27
Huss Lumber Co 2301 N Racine Av Chicago
John Bader Lbr Co 2020 Clybourn Av Chicago 7
Silbernagel Geo J 8 S Michigan Ave Chicago
Alexander Warehouse & Sales Co 105 W Adams St Chicago 3
American Wholesalers 525 W 76th St Chicago 20
Georgia-Pacific Plywood Co 1805 Bryn Mawr Av Chicago
Great Lakes Plywood Inc 2333 South Halsted St Chicago 8
Harbor Plywood Corp 1444 W Cermak Rd Chicago 8
Kochton Plywood and Veneer Co 509 W Roosevelt St Chicago
Associated Door & Plywood Co 2141 S Throop St Chicago
Hannapel Door & Plywood Co 525 W 76th St Chicago
Plywood Distributing Co 1500 S Western Ave Chicago
National Plywoods Inc 2710 S Throop Chicago
The Rayner Co 1400 W Carroll Av Chicago 7
Reserve Supply Corp 1529 S Jefferson Chicago 7
Roddis Co 3865 W 41st St Chicago 32
United States Plywood Corp 900 W Division St Chicago
Midwest Jobbers Inc 3300 S Racine Ave Chicago 8
East Side Lumberyard Supply Co 726 Brady Ave East St Louis
Valley Mercantile Co P O Box 152 Elgin
Southern Wholesale Lbr Co Fairfield
Lumber Dealers Supply Co Libertyville
Ward Plywood Co 2700 S Washington Peoria
Aetna Plywood & Veneer Co B1610 Warehouse Rd Camp Grant Rockford
Rockford Wholesale Bldg Materials Co 201 E State St Rockford
BHM Building Materials Inc 1528 N 11th St Springfield

INDIANA

Amos-Thompson Corp Edinburg
Elkhart Plywood & Door Inc 1334 W Wolf Elkhart
Smith Plywood Corp PO Box 192 Elkhart
Building Products Co Inc 101-109 N Elliott Evansville
Tri-State Wholesale Sash & Door Co 1330 E Franklin St Evansville
Evansville Sash & Door Co Inc 1001 Mount Auburn Rd Evansville
Indiana Wholesalers Inc 221 E Illinois St Evansville
Stremming Raymond W Co Inc P O Box 564 Evansville
Indiana Reserve Supply Co 1009-11 Cochran St Ft Wayne
Michigan Wholesalers Inc PO Box 536 Ft Wayne
Barnaby Fobes & Co Greencastle
Fiddes-Moore & Co 4959 State Line Ave Hammond
Aetna Plywood & Veneer Co 1150 S. Division St Indianapolis 21
Harbor Plywood Corp of Ind 1001 E New York St Indianapolis
Lumbermen's Wholesale Supply Corp 1002 E 25th St Indianapolis
American Plywoods & Millwork Co 1123 W 21st St Indianapolis
Midland Building Industries Inc P O Box 766 Indianapolis
Great Lakes Distributing Corp 212 W Ewing South Bend 14 also Ft Wayne Logansport
Eagle Lbr Dealers Supply Co 1450 N Washington St Marion
Hass Wholesale Inc 3922 W Sample St South Bend 21
Wholesale Distributors Co 709 N Grandview (Ardmore) South Bend

IOWA

Joyce Wholesale Co 21st & 2nd Council Bluffs
Ashton Wholesale Service 121 S W 5th St Des Moines 9
Lumbermen's Associated Buyers Co 702 Elm St Des Moines 9 Also Cedar Rapids and Ft Dodge
Hughes Bros Co 919 6th Ave S W Cedar Rapids
National Lbr & Shingle Co P O Box 643 Des Moines
Queal Distributing Co E 4th & Grand Av Des Moines
Tip Top Distributing Co 300 S W 9th St Des Moines
Wheeler Lbr Bridge & Supply Co P O Box 1321 2260 Flyer Av Des Moines
Ft Dodge Wholesale Dist Co Ft Dodge
Iowa Lbr & Supply Co Ft Dodge
Interstate Wholesale Inc P O Box 242 Ft Madison
Mason City Bldrs Supply Co Mason City
Mould Thos Lbr Co P O Box 715 Sioux City
Omaha Hardwood Lbr Co 104 Myrtle St Sioux City
Wood Products 127 Utica Waterloo

KANSAS

L J White Lumber Co Inc Hutchinson
U S Mengel Plywoods Inc 2935 Chrysler Rd Kansas City
Pacific Mutual Door Co Adams & Shawnee Sts Kansas City 3
Stark W P Lbr Co Inc Fairfax Rd & Quindaro Blvd Kansas City
Roddis Lumber and Veneer Co Inc 35-53 Southwest Blvd Kansas City 3
T F Martin Lumber Co 519 Jackson St Topeka
Wichita Building Material Co Inc 414 S Commerce St Wichita 2

KENTUCKY

Bass & Co State St Bowling Green Also Hopkinsville Owensboro and Paducah
W P Allen Lbr Co Paducah
Central Kentucky Supply Co 750 National Ave Lexington

Harbor Plywood Co of Ind 829 S 9th St Louisville
Lumbermen's Wholesale Service Inc 1423 Hemlock St Louisville 11
Mutual Service Co Inc 435 E Burnett Ave Louisville
Roddis Panel and Door Co 1201-5 S 15th St Louisville 10
U S-Mengel Plywoods Inc P O Box 1612 Louisville

LOUISIANA

Lumber Dealers Supply Co Inc P O Box 1421 Baton Rouge
Southern Millwork & Supply Co Inc 122 S Buchanan Lafayette
Dealers Supply Co Inc 2928 Louisville Av P O Box 1863 Monroe
Lumbermen's Supply Co Monroe
Gulf States Plywood Co 781 La Salle St New Orleans 12
Bacon Lbr Co 1341 S Peters St New Orleans
Le Baron S Mallory 2117 Kentucky New Orleans
Tulane Hardwood Lbr Co Inc P O Box 7006 Sta G New Orleans
U S-Mengel Plywoods Inc 887 Race St New Orleans
Allen Millwork Mfg Co Saint Vincent Av & 63rd St Shreveport
Central Wholesale Co Inc P O Box 1217 Shreveport

MAINE

Turgeon Brothers Avon St Lewiston
Farnham (H F) Co 440 Commercial St Portland

MARYLAND

Central Building Supply Inc 210 E Monument St Baltimore 2
Harbor Sales Co Inc 1501 S Warner St Baltimore 30
MacLea Lumber Co 506 S Central Ave Baltimore 3
Mears Inc John H Howard & Ostend Sts Baltimore
Pacific Mutual Door Co 1407 Fleet St Baltimore
Timber Products Inc 3 W Franklin St Baltimore 1
United States Plywood Corp 2020 W Mosher St Baltimore 17

MASSACHUSETTS

Seaboard Sales Corp 293 Lincoln St Allston 34
United States Plywood Corp 57 Mystic Av Somerville 43 Boston
Georgia-Pacific Plywood Co Castle Island Terminal So Boston
Roddis Plywood & Door Co Inc 229 Vassar St Cambridge
Building Materials Wholesalers 286 Rutherford Ave Charlestown
Winde-McCormick Lbr Co Inc 295 Medford St (Charlestown) Boston
New England Panel Co Everett
Hastings (A W) & Co Inc 373 Highland Somerville 44

MICHIGAN

Patterson—Buck Hardwood Co Box 488 Northwestern Sta Detroit
Wholesale Distributors Co P O Box 351 Ann Arbor
Midwest Plywood Co 10101 Lyndon St Detroit
Howard A Davidson Lbr Co P O Box 3908 Strathmoor Sta Detroit
Dealers Wholesale Supply Inc 12871 Eaton Ave Detroit
Roddis Lumber and Veneer Co of Mich 11855 E Jefferson St Detroit 14
Aetna Plywood & Veneer Co 523 W Fulton Grand Rapids 4
Plywood Grand Rapids Co 35 Front Av SW Grand Rapids
Porter-Hadley Co 255 Cottage Grove St S E Grand Rapids
Evans & Retting Lbr Co 707 Wealthy St N W Grand Rapids
Thompson Plywood Co 38 Ionia Ave S W Grand Rapids
Ward Plywood & Door P O Box 56 Grand Rapids
Western Michigan Bldg Material & Supply Co 47 Scribner N W Grand Rapids 4
Michigan Wholesalers Inc P O Box 530 Jackson
Wholesale Lumber Products Co Muskegon
Lumbermen's Credit & Warehouse Co 628 Second St Kalamazoo
Fillmore Thomas & Co Inc Lapeer
Dooley Distributing Co 2085 E Genesee Ave Saginaw
Saginaw Sash & Door Div Saginaw Lbr Co 319 McCoskry St Saginaw also Alpena and Cadillac
Mid-West Bldg Dist Inc St Louis
Traverse City Lbr Co 618 E Front St Traverse City

MINNESOTA

Northern Plywood & Door Co 725 2nd Av No Minneapolis 5
Northwest Supplies Co 14th Av & Van Buren St NE Minneapolis
Youngblood Lumber Co 1335 Central Av NE Minneapolis 13
Rock Island Wholesale Co 1st Natl Bank Bldg St Paul
F I Products Co 331 1st Federal Bldg St Paul
Midway Lumber Co 630 N Prior Ave St Paul 4
Pacific Mutual Door Co 2235 Territorial Rd St Paul 4
Reserve Supply Co 2570 Ellis Ave St Paul
Twin City Hardwood Lumber Co 509 Cleveland Av N St Paul
Hanson-Mueller Lbr Sales Box 434 Winona

MISSISSIPPI

Standard Millwork & Supply Co 2000 N Mill P O Box 1005 Jackson
Georgia-Pacific Plywood Co Florence Av Jackson
Allen Builders Supply Co 627 W Monument St Jackson
Delta Building Material Co Leland
Lumbermen's Supply Co 230 Thompson St Jackson

MISSOURI

Cape Supply Co 14 S Frederick Cape Girardeau
Four States Supply Co 100 River St Carthage
Williamson J C Dexter
Waggener Store Co Festus
Christmann Plywood Co 4464 Duncan Av St Louis
Fry-Fulton Lumber Co 148 Carroll St St Louis
Gaines Hardwood Lbr Co 24 Branch St St Louis
Huttig Sash & Door Co 1206 S Vandeventer St Louis
Lumberyard Supply Co 5060 Manchester St Louis 10
Roddis Company 3344 Morganford Rd St Louis 16
Steele & Hibbard Lumber Co 3300 N Hall St St Louis
U S-Mengel Plywoods Inc 2401 S First St St Louis
Colp Wholesale Co Sikeston
Toombs & Company 423 N Campbell Springfield
Southern Supply Co 505 E Olive St P O Box SS-1581 Springfield

MONTANA

Western Builders Supply 1510 Montana Ave Billings
Building Service Inc Great Falls
Yaw-Kinney Co Inc Great Falls

NEBRASKA

Byers Lbr Co 101 S Hastings Av Box 157 Hastings
Central Lbr Sales Co 600 N 17th Lincoln
Wheeler Lbr Bridge & Supply Co PO Box 727 Norfolk
Chicago Lbr Co of Omaha 1324 Pierce St Omaha 8
Omaha Hardwood Lbr Co P O Box 1113 Omaha
Joyce Wholesale Co 1208 W O W Bldg Omaha
Lumbermen's Brick & Supply Co 900 S 15th St Omaha
Scottsbluff Sash & Door Co Scottsbluff

NEVADA

Flanigan Warehouse Co 408 Eureka Av Reno
Morrison-Merrill & Co P O Box 906 Reno

NEW HAMPSHIRE

Diamond Match Co Dover
U S Plywood Corp Lakeport
Plywood Wholesale Co 37 Union St Manchester

NEW JERSEY

Suburban Plywood Co 78-80 Main St East Orange
Pacific Mutual Door Co Elizabeth
Quigley Co J R 811 Market St Gloucester City
Rudinger Inc C R South Kearny
Roddis Company Inc 103 Marsh St Port Newark 5
United States Plywood Corp 540 Ferry St Newark
Forest Products Inc Newark Tidewater Terminal Newark
Georgia-Pacific Plywood Co Independent Term Port of Newark Newark

NEW MEXICO

Southwestern Sash & Door Co P O Box 595 Albuquerque
New Mexico Co P O Box 895 Albuquerque
Santa Fe Builders Supply Co P O Box 899 Santa Fe also 1803 N 6th St Albuquerque

NEW YORK

Albany Plywood Co Inc 390 So Pearl St Albany
Wallboard Wholesalers Inc 667 Wythe Ave Brooklyin 11
Industrial Plywood Co 105-15 180 St (Jamaica) New York
Harrison Co 260 Broadway Brooklyn
Buffalo Plywood Co 1950 Elmwood Av Buffalo
Henrich Plywood Co Inc 171 Walden Ave Buffalo
Niagara Plywood Co Inc 1234 Broadway Buffalo
Seligman Plywood & Millwork Co 11-01 40th Av Long Island 1 N Y
United States Plywood Corp 101 Nassau Terminal Rd New Hyde Park L I N Y
Eastern Plywood & Door Co Inc P O Box 622 Jamestown also 215 Sunset Av Syracuse & 1250 Broadway New York
Roddis Plywood and Door Company Inc Plaza Av & S 18th St New Hyde Park L I
Plunkett-Webster Plywood Corp 271 North Av New Rochelle also 815 E 136th St New York 54
Baris (J C) Lbr Co 76 Beaver St New York 5
Fischer Charles F & Co Inc 1380 Randall Av Bronx New York
Plywood Products Corp 213 Chrystie St New York 2
Rieser (Arthur J) Panel & Veneer Co Inc 156 E 30th St New York
American Lumber Co Inc 25-45 Borden Av Long Island City 1
Atlantic Plywood Co 30 Vesey St New York
Carl Besch Co Grand Central Terminal New York
Chesler Plywood Co Inc 708 E 133rd St New York
Elson Plywood Co Inc 217 W 21st St New York
Empire Plywood Corp 223-01 Braddock Ave (Bellrose) New York
A J Gallagher Chanin Bldg New York
National Plywood Co Inc 455 Exterior St New York 51
Roddis Plywood and Door Company 920 E 149 St New York 55
Rogers M H Lbr Sales Co Inc 51 Buchanan Pl (Bronx) New York
York Lbr Co 1780 Broadway New York
United States Plywood Corp 55 W 44th St New York 18 also Brooklyn Rochester
A C Dutton Lbr Corp 8 Catherine St Poughkeepsie
Davis Plywood Corp 532 S Clinton Rochester
Eastwood Lumber Co Inc Div Plunkett-Webster Lbr Co Inc 401 N Midler Av Syracuse

NORTH CARLINA

North State Material Co P O Box 5217 Asheville
Atlanta Oak Flooring Co P O Box 2741 Charlotte
Roddis Panel and Door Company 123 E 27 St Charlotte 6
Carolina Plywood & Door Co Inc Fayetteville
Binswanger & Co Inc 211 S Macon St Greensboro
Hassinger Wholesale Co Greensboro
United States Plywood Corp Mallory St at Asheboro RR High Point

NORTH DAKOTA

Builders Supply Co Bismarck
Twin City Hardwood Lumber Co Fargo
Minot Bldrs Supply Co Inc Minot

OHIO

Dealers Wholesale Lbr & Supply Co 71 Darrow Rd Akron 5
Athens Flooring Co 35 Elliott St Athens
Clem Lumber & Distributing Co 3182—98 Beekman St Cincinnati
Harbor Plywood Corp of Indiana 511 Baymiller St Cincinnati 2
Mussman & Shafer Inc 15 E Third St Cincinnati
Ohio Valley Plywood Co 5402 Vine St (Saint Bernard) Cincinnati 17
Roddis Panel and Door Company 836 Depot St Cincinnati 4
United States Plywood Corp 3131 St Clair Av Cleveland
Consumers Materials Co 3716 Montgomery Rd Cincinnati
Cleveland Plywood Co Div of Plywood Inc 8901 Woodland Av Cleveland 4
Davis Plywood Corp 12555 Berea Rd Cleveland 11 Also 303 Division St Toledo and Columbus
Industrial Wholesale Lumber Co 4300 E 68th St Cleveland
Ohio Dealers Wallboard Co 3807 King Ave Cleveland 14
Huttig Sash & Door Co 902 W Goodale St Columbus
Dayton Plywood Co 4395 Springfield St Dayton 3
J-G Plywood Sales Co 748 Albany St Dayton 8
Michigan Wholesalers Inc P O Box 8 Toledo 14
Rae Bldg Materials 1301 Prouty Av Toledo

OKLAHOMA

The Long-Bell Lbr Co Sash & Door Div 202 E Pine St Enid Also Oklahoma City and McAlester
Dyke Bros 435 S W 9th Oklahoma City
Neal Millwork & Supply Co 217 E Grand Oklahoma City 2
Plywood Distributors & Supply Inc P O Box 1891 Oklahoma City
South-West Lbr Co 924 SW 3rd St Oklahoma City
Barney Stewart Wholesale Bldrs Supplies Inc 910 N Walker Oklahoma City
Lumbermens Supply Co 1530 W Main St Oklahoma City
Plywood Oklahoma Inc 2 SW 6th St Oklahoma City
Osage Building Material Co Inc Pawhuska

OREGON

Twin Oaks Blds Supply Co 669 High St Eugene
Lumber Products-Eugene P O Box 487 Eugene
Hawley Gilbert Co 433 N Thompson St Portland
Fuller (W P) & Co PO Box 4170 Portland
Lumber Products 2116 NW 20th Av Portland 9
Sand (Chas E) Plywood Co 1106 N W 16th Ave Portland 9
Wanke Panel Co 2204 N Clark Ave Portland 12
M Trumbo Co Inc 217 S E Taylor St Portland

PENNSYLVANIA

Erie Lumber Co P O Box 1164 Erie
Scranton Plywood Company Forty Fort
United Supply Co 26 S 2nd St Greenville
M L Claster & Sons Inc Lock Haven
Daniel Buck, Inc Aramingo & Westmoreland St Philadelphia 34
Mayfair House Lincoln Dr Philadelphia
Philadelphia Reserve Supply Co Luzerne & "F" St Philadelphia
Quigley (J R) Co 1028 N Delaware Ave Philadelphia Also Lancaster Cressona Harrisburg
Roddis Company Inc Richmond and Tioga Sts Philadelphia 34
United States Plywood Corp 1717 N Delaware Philadelphia
Hal Keely Plywood Co 2001 Preble Av Pittsburgh 33
Iron City Sash & Door Co 140 S 26th St Pittsburgh 3
Stirling Lbr Co 500 Brushton Ave Pittsburgh 21
United States Plywood Corp 941 Behan St Pittsburgh
Wholesale Distributing Co 36th & A V RR Pittsburgh
Eiler Edward Lumber Co 914 Frick Bldg Pittsburgh
Pittsburgh Plywood & Door Co 61 S 4th St Pittsburgh 19
A J Redlich Mfg Co 4601 Baum Blvd Pittsburgh
Central Door & Plywood Co 342 Rose St Reading
Robbins Door & Sash Co 301 Green Ridge Scranton 9
Schirra Geo M 1200 River St Scranton

RHODE ISLAND

Seaboard Sales Corp P O Box 1612 Providence
H A Grimwood Co 1163 Westminster St Prvoidence

SOUTH CAROLINA

Binswanger & Co Inc 1800 Laurel Columbia also Florence
Dealers Supply Co 420 W McBee Av Greenville

SOUTH DAKOTA

Lumbermen's Supply Co 617 E 7th Sioux Falls
Farley Loetscher Co 701 E 8th St Sioux Falls
Jordan Millwork Co Sioux Falls

TENNESSEE

Memphis Sash & Door Co Box 437 Memphis
Walter R Jones Sterick Bldg Memphis
J E Chilton Millwork & Lumber Co 512 27th Ave N Nashville
Tennessee Glass Co 184 2nd Ave N Nashville
Warren Bros Co P O Box 1101 Nashville
Dealers Supply Co Inc Cherry St Johnson City Also Nashville
Dealers Warehouse Corp 1372 N 6th Ave Knoxville
U S-Mengel Plywoods Inc 2191 Person Ave Memphis
Bass & Co 707 19th Av N Nashville

TEXAS

Long-Bell Lbr Co P O Box 1761 Amarillo
Buell & Company 2439 Swiss Av Dallas
Dyke Sash & Glass Co 208 Jenson Dr Houston
Lyon-Gray Lbr Co Wholesale Dept 1305 Commerce St Dallas
Roddis Lumber and Veneer Company Inc 2800 Medill St Dallas 10
Rue O'Neill P O Box 1161 Dallas
Galbraith Steel & Supply Co Mercantile Securities Bldg Dallas 1 Also Lubbock and Pecos
Huttig Sash & Door Co 6519 Cedar Springs Rd Dallas 9
Moore & Co 309 S Market St Dallas
U S-Mengel Plywoods Inc 2825 Manor Way Ave Dallas
Southwestern Sash & Door Co P O Box 1919 El Paso
Chickasaw Lbr Co P O Box 710 Ft Worth
Sloan Lbr Co 201-9 W Vickery Blvd Fort Worth
Texas Sash & Door Co 201 Rupert St Fort Worth
Mrs J L Henderson P O Box 122 Fort Worth
Leeper Lbr Co P O Box 656 Ft Worth
Roddis Lumber and Veneer Company Inc 2425 Sabine St Houston 10
Plywood-Houston Inc 2201 Dallas St Houston 3
U S-Mengel Plywoods Inc P O Box 9038 Houston
Vaughan Geo C & Sons Scanlon Bldg Houston Also San Antonio and Nederland
Roddis Lumber and Veneer Company Inc 727 N Cherry St San Antonio 6
U S-Mengel Plywoods Inc P O Box 65 Grayson St Sta San Antonio
Sweetwater Sash & Door Co Sweetwater
Cameron (Wm) & Co 2400 Mary St Waco Also Abilene Altus Austin Beaumont Corpus Christi Dallas Fort Worth Harlingen Houston Lubbock Iufkin Odessa San Angelo San Antonio Texarkana Tyler Wichita Falls
Nash Robinson & Co 1600 Franklin Av Waco

UTAH

Knudsen Builders Supply Co 203 W Fifth So St Salt Lake City 9
Morrison-Merrill & Co 3rd West & 1st North Salt Lake City 11
Pioneer Wholesale Supply Co 830 So 4th West Box 576 Salt Lake City 10
R W Frank & Co Inc 118 S Fifth St W Salt Lake City
Lumber Dealers Supply 1116 Cont Bank Bldg Salt Lake City

VERMONT

Delos M Buck Barre

VIRGINIA

Central Warehouse Corp Bristol
Binswanger & Co Inc 3300 W Leigh St Richmond
Buswell-Freeman Timber Co Inc Brokers Exch Bldg Norfolk
Beamon's Inc P O Box 512 Suffolk

WASHINGTON

Stouffer-Bowman Co Aberdeen
Lumber Supply & Warehouse 535 Elliott Ave W Seattle
Building Supplies Co 4319 Stoneway Seattle
Lewis Co Inc Palmer G 2 Hanford St Seattle 4
North-Robbins Plywood Inc 410 Terry Av N Seattle 9 Also Spokane
Puget Supply Co P O Box 1844 Seattle 11
Tovbin Lumber Sales Co 4526 Airport Way Seattle
United States Plymood Corp 13th & W Nickerson Seattle
Simpson Logging Sales Div Warehouse Shelton
Lumbermen's Supply Corp E 3002 Mission Spokane 15
Building Supplies Inc N 528 Cedar St Spokane
Idaho Supplies Inc 310 Peyton Bldg Spokane 8
Consolidated Sales Co 540 E 15th St Tacoma 2
Lundgren Dealers Supply Inc 440 E 25th St Tacoma
Pacific Mutual Door Co P O Box 1589 Tacoma
Rusdick Lumber Sales P O Box 1395 Tacoma
A J Johnson & Co Inc 459 E 15th St Tacoma
Plywood Sales & Box Co 2909 S Alaska St Tacoma
Plywood Tacoma Inc 540 East 15th St Tacoma 2
Washington Lbr Sales Inc P O Box 63 Tacoma
Exchange Lbr & Mfg Co P O Box 1514 Spokane 11

WEST VIRGINIA

Hartland Planing Mill Co 715 W Pike Clarksburg
Brust Door & Plywood Co P O Box 1786 Huntington 19
H L Seabright Co 43rd & McCollock Sts Wheeling
Wilson & Sons W A 1409 Main Wheeling
Mingo Lime & Lbr Co Williamson

WISCONSIN

Wisconsin Wholesalers Inc P O Box 389 Green Bay
Lumber Dealers Supply Inc 1040 S Broadway Green Bay
Schraufnagel Wholesale Inc 1026 S Broadway Green Bay
Griffin Wholesale Inc 13th & Green Bay St La Crosse
Lumbermens Service La Crosse
J J Fitzpatrick Lbr Co Inc 3230 University Ave Madison 5
Lumbermens Supply Co 210 S Baldwin St Madison
Aetna Plywood & Veneer Agency 3116 W Michigan Milwaukee
Milwaukee Plywood Co 1227 W Bruce St Milwaukee
Kochton Plywood & Veneer Co Inc 500 S 11th St Milwaukee
Roddis Plywood Corp 4601 State St Milwaukee
United States Plywood Corp 3354 W 35th St Milwaukee
Falls Dealer Supply Co Sheboygan Falls
Wilbur Warehouse & Sales Co 1910 S 80th St West Allis 14

Building Products and Equipment Directory

THIS classified list of products, equipment and services has been compiled to make it easy for lumber and building products retailers and wholesalers to select and purchase the products, equipment and services they require. Dealers expanding their lines should find this list most helpful.

To locate the manufacturers of any product, equipment or service, look for the desired product alphabetically. In order to include as many sources of supply as possible in the space available, the directory is presented in streamline style without cross references on the assumption that readers are familiar enough with the use of classified listings to provide their own cross references in those cases where there is reasonable doubt as to the heading under which a particular product or service should be listed. Choice of either the noun or the descriptive adjective as the governing word in determining the classification was made in each case on the basis of which is the dominating word in the opinion of the directory editors.

All product listings are alphabetical except for lumber which will be found in a special section immediately following the other classifications. In this section the principal lumber products normally supplied by each company are indicated by appropriate symbols.

It is hoped that readers will make the fullest possible reference-use of the directory pages in their day to day buying and selling activities.

ABRASIVES—coated

Abrasive Prod Inc So Braintree Mass
Armour & Co 1355 W 31st St Chgo 9 Ill
Behr-Manning Corp Troy N Y
Carborundum Co Niagara Falls N Y
Clover Mfg Co Norwalk Conn
Minnesota Mining & Mfg Co St Paul 6 Minn
Red Devil Tools Irvington 11 N J
Sandpaper Inc Rockland Mass

ACOUSTICAL MATERIALS

Armstrong Cork Co 4704 Ocean Av Lancaster Pa
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Celotex Corp 120 S LaSalle Chgo 3 Ill
Insulite Div Minnesota and Ontario Paper Co Baker Arcade Bldg Minneapolis 2 Minn
Johns-Manville Sales Corp Box 290 22 E 40th New York 16 N Y
Lockport Cotton Batting Co Lockport N Y
National Gypsum Co 325 Delaware Av Buffalo 2 N Y
Owens-Corning Fiberglas Corp Nicholas Bldg Toledo 1 Ohio
Simpson Logging Co 1065 Stuart Bldg Seattle 1 Wash
United States Gypsum Co 300 W Adams Chicago 6 Ill
Zonolite Co 135 S LaSalle Dept AL-42

ADHESIVES

Abesto Mfg Corp Dept D-3 Michigan City Ind
Aetna Plywood & Veneer Co 1732 Elston Av CHgo 22 Ill
Alloy Tile Corp 109 Roosevelt Ave Belleville N J
Armour & Co 1355 W 31st St Chicago Ill
Armstrong Cork Co 4704 Ocean Av Lancaster Pa
The Borden Co Chemical Div 350 Madison Av New York N Y
Christy Co Inc St Louis 10 Mo
The Commercial Paste Co Buttles at Michigan Columbus 8 Ohio
Consumers Glue Co St Louis Mo
Davis Plywood Corp 12555 Berea Rd Cleveland 11 Ohio
East Coast Tileboard Corp 41-59 Wyckoff Ave Brooklyn 27 N Y
B F Goodrich Co Akron O
Goodloe E Moore Inc PO Box 846 Danville Ill
Insulite Div Minnesota & Ontario Paper Co 500 Baker Arcade Bldg Minneapolis 2 Minn
Kentile Inc 58 Second Ave Brooklyn 15 N Y
Le Page's Inc Gloucester Mass
Marsh Wall Products Inc Sub of Masonite Corp Dept 441 Dover O
Milwaukee Plywood Co 1227 W Bruce St Milwaukee 4 Wis
Minnesota Mining & Mfg Co St Paul 6 Minn
Mircale Adhesives Corp 214 E 53rd St NY 22 NY
National Adhesives 270 Madison Av New York 16 N Y
National Casein Sales 601 W 80th Chgo 20 Ill
Paisley Prods Inc 1770 Canalport Av Chgo 16 Ill
Patent Cereals Co Geneva N Y
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Perkins Glue Co Lansdale Pa
Prestile Mfg Co 5850 Ogden Av Chicago Ill
Rohm & Haas Co Washington Sq Philadelphia 5 Pa
Superior Wall Prods Co 4401 N American St Philadelphia 40 Pa
Tylac Co Monticello Ill
Walter E Selck & Co 225 W Hubbard Chgo 10 Ill
Standard Paste & Glue Co Inc 3620 W 38th St Chicago Ill
United States Plywood Corp Industrial Adhesives Div 55 W 44th St NY 18 NY
U S Rubber Co 1230 Av of the Americas NY 20 NY
Wallace Mfg Co 10th & Fayette Kansas City Mo

ADJUSTERS—screen & sash

P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Detroit Steel Prods Co Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
H S Getty Co Inc 3348 N 10th St Philadelphia 40 Pa
Ideal Brass Wks Inc 250 E 5th St St Paul 1 Minn
H B Ives Co New Haven 8 Conn
F D Kees Mfg Co Box 8 Beatrice Neb
Chas O Larson Co Sterling Ill
Nat'l Brass Co Grand Rapids Mich
S Parker Hdwe Mfg Corp 27 Ludlow St NY 2 NY
Russell & Erwin Div The American Hardware Corp New Britain Conn
Sargent & Co Dept 3D P O Box 1940 New Haven 9 Conn
Wright Products Co St Paul Park Minn

ADVERTISING SERVICES

Bradham & Co Piedmont Bldg Greensboro N C
Building Products Merchandising Service 1413 Allison St NW Washington 11 D C
Lil-Ad Features RFD 3 Box 150-A Santa Ana Cal
Local Trademarks Inc 87 Madison St N Y 16 N Y
Motion Picture Advertising Service Co Inc 1032 Carondelet St New Orleans La
National Advertising Co Sub Minnesota Mining & Mfg Co Waukesha Wis
Norm Advertising Inc 79 Madison Av N Y 16 N Y
Stevens Advertising Agency 1105 Inland Bldg Indianapolis 4 Ind
United Film Service Inc 2449 Charlotte St Kansas City Mo
Worldwide Syndicate PO Box 6117 Dallas Tex

ADVERTISING SPECIALTIES

American Emblem Co Utica N Y
Joseph Dixon Crucible Co Wayne & Monmouth Sts Jersey City 3 N J
Economy Novelty & Printing Co 225 W 39th St New York 18 N Y
Kemper-Thomas Co Norwood Pk Cincinnati 12 Ohio
The Thos D Murphy Co Red Oak Iowa
Parisian Novelty Co 3510 Western Av Chicago 9 Ill
Tiffin Art Metal Co Tiffin 16 Ohio
Worldwide Syndicate PO Box 6117 Dallas Tex

AGGREGATES—lightweight, concrete, plaster

Acme Asbestos Covering & Flooring Co 246 N Elizabeth Chgo 7 Ill
Great Lakes Carbon Corp Bldg Prods Div Dept 25-4 18 E 48th St New York 17 N Y
F E Schundler & Co Inc 504 Railroad St Joliet Ill
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill
Zonolite Co Dept AL-41 135 S La Salle St Chicago 3 Ill

AIR COMPRESSORS

Allis-Chalmers Mfg Co Milwaukee 1 Wis
Binks Mfg Co 3124 W Carroll Av Chgo Ill
Chicago Pneumatic Tool Co 6 E 44th St NY 17 NY
Davey Compressor Co Kent O
The DeVilbiss Company 300 Phillips Av Toledo 1 Ohio
Gardner Denver Co Quincy Ill
Ingersoll-Rand Co 11 Broadway New York 4 N Y
Paasche Airbrush Co 1909 W Diversey Chgo Ill

AIR CONDITIONING UNITS

American Blower Corp Detroit 32 Mich
Bryant Heater Div Affiliated Gas Equipment Inc 17825 St Clair Av Cleveland 10 Ohio
Carrier Corp Syracuse 1 N Y
Chrysler Corp Airtemp Div Dayton 1 O
Clarage Fan Co Kalamazoo 16 Mich
Frigidaire Div Gen'l Motors Sales Corp Dayton O
General Electric Co Schenectady 5 N Y
Norge Div Borg Warner Corp 672 Woodbridge St Detroit 26 Mich
Round Oak Co Dowagiac Mich
Surface Combustion Corp Toledo 1 Ohio
The Trane Co La Crosse Wis
Waterman-Waterbury Co 1121 Jackson St NE Minneapolis 13 Minn
Westinghouse Electric Corp Sturtevant Div Hyde Park Boston 36 Mass
Williams Oil-O-Matic Div Eureka Williams Corp Bloomington Ill

ANCHORS—building, concrete

Ackerman-Johnson Co 625 W Jackson Blvd Chgo 6 Ill
Cleveland Steel Specialty Co Inc 3765 E 91st St Cleveland 5 Ohio
Consolidated Iron-Steel Mfg Co 1292 E 55rd St Cleveland 14 Ohio
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Industrial Iron Wks PO Box 4625 Portland 2 Ore
Laclede Steel Co Arcade Bldg St. Louis 1 Mo
Marwin Mfg Co Erie Pa
Metal Crafters 1756 E Av NE Cedar Rapids Ia
Goodloe E Moore Inc PO Box 846 Danville Ill
Paine Co 2951 Carroll Av Chicago 12 Ill
Rawlplug Co Inc 271 Church St New York 13 NY
Richmond Screw Anchor Co Inc 816 Liberty Av Brooklyn 8 N Y
Southern Wire & Iron Wks 441 Memorial Dr SE Atlanta Ga
Star Expansion Products Co Inc 147 Cedar St N Y 6 N Y
U S Expansion Bolt Co York Pa
Wagner Mfg Co Dept ALG-52 Cedar Falls Ia

APPRAISERS & ESTIMATORS—industrial

American Appraisal Co 525 E Michigan Milwaukee 2 Wis
General Appraisal Co Seattle 4 Wash
Industrial Appraisal Co Memphis Tenn
Mississippi Valley Appraisal Co 220 N 4th St St Louis 2 Mo
Southwestern Appraisal Co 4 W 13th St Kansas City 6 Mo
Standard Appraisal Co 6 Church New York 6 N Y

APRONS—carpenter, clothespin

The Astrup Co 2937 W 25th St Cleveland 13 Ohio
Bemis Bro Bag Co 111 N 14th St Box 45 St Louis 2 Mo
Clifton Mfg Co 333 Pleasant St Waco Tex
Economy Novelty & Printing Co 225 W 39th N Y 18 N Y
Fulton Bag & Cotton Mills Atlanta Ga
Minnesota Specialty Co 119 N 4th St Minneapolis 1 Minn
Standard Awning Co 83 Avon St Hartford 5 Conn
Troy Sunshade Co Troy O
Werner Canvas Products Co 609 Bergen St Brooklyn 17 N Y

ARCHES—wood, laminated

American Roof Truss 1030 E 87th St Chicago 19 Ill
McKeown Bros Co 5235 S Keeler Av Chgo 32 Ill
Rilco Laminated Products Inc 2521 First Natl Bank Bldg St Paul 1 Minn
Super-Structures Inc Albert Lea Minn
Unit Structures Inc Peshtigo Wis
Weyerhaeuser Sales Co St Paul 1 Minn

AREA WALLS—steel

Armco Steel Corp 703 Curtis St Middletown Ohio
Brainard Steel Co Dept F-4 Bldg Products Div 3411 Griswold St Warren O
Ceco Steel Prods Corp 5601 W 26th St Chicago 50 Ill
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Harris Inc 220 E Long St Columbus 15 Ohio
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Penn Metal Co Inc 205 E 42nd St New York 17 N Y
St Paul Corrugating Co St Paul 1 Minn
United Steel Fabricators Inc Wooster O

ASH DUMPS

The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Gabriel Steel Co 13700 Sherwood St Detroit 12 Mich
Harris Inc 200 E Long St Columbus 15 Ohio
Hart Prods Inc 915 E Kentucky St Louisville 4 Ky
Heatilator Inc 334 E Brighton Syracuse 5 N Y
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Metal Crafters 1756 E Av NE Cedar Rapids Ia
Superior Fireplace Co 1708 E 15th St Dept AL-521 Los Angeles 21 Cal & 601 North Point Rd Dept AL-521 Baltimore 6 Md
Vestal Stove Co Box 152-A Sweetwater Tenn

AWNINGS—canvas

American Tent & Awning Co 1132 Mission San Francisco Cal
The Astrup Co 2937 W 25th St Cleveland 13 Ohio
Canvas Products Co 1240 S 7th St St Louis 4 Mo
Clifton Mfg Co PO Drawer 2029 Waco Tex
Fulton Bag & Cotton Mills Atlanta Ga
W E Hettrick & Son Co PO Box 377 Toledo 1 Ohio
Indestructo Awning Co 54 W Grand Av Chgo Ill
Tucker Duck & Rubber Co Fort Smith Ark
United Tent & Awning Co 759 N Spring Los Angeles Calif

AWNINGS—metal

Fawsco Mfg Div of Falls Stamping & Welding Co 1701 Front St Cuyahoga Falls Ohio
Leigh Bldg Prod Div 7 Air Control Prods Inc Coopersville Mich
Metal Tile Prods Inc 120 N Broadway Hastings Mich
Orchard Bros Inc 63 Meadow Rd Rutherford N J
Ron-del Folding Aluminum Awning Co of Minnesota 436 N Smith Av St Paul Minn
F C Russell Co 1100 Chester Av Dept 7 AL-42 Cleveland 1 Ohio
Troy Sunshade Co Troy Ohio
Wolfe Products Inc Akron 11 Ohio

BAGS—canvas, all kinds

The Astrup Co 2937 W 25th St Cleveland 13 Ohio
Bemis Bros Bag Co 111 N 4th St St Louis 2 Mo
Canvas Products Co 1240 S 7th St St Louis 4 Mo
Clifton Mfg Co PO Drawer 2029 Waco Tex
Troy Sunshade Co Troy Ohio
Werner Canvas Products Co 609 Bergen St Brooklyn 17 N Y

BALING PRESSES

Economy Baler Co Ann Arbor Mich
Lewis T Kline Co Alpena Mich (excelsior)

BALUSTERS—metal

Artcraft Ornamental Iron Co 724 E Hudson Columbus O
Belson Mfg Co 111 Franklin Aurora Ill
Logan Co Inc Louisville 6 Ky
Metal Crafters 1756 E Av NE Cedar Rapids Iowa
Newman Bros Inc Dept A-L 660 W 4th St Cincinnati 3 Ohio
F P Smith Wire & Iron Wks Inc 2346 Clybourn Av Chgo 14 Ill

BALUSTERS—wood

Carr Adams & Collier Co Dubuque Ia
Crossett Lbr Co Crossett Ark
Curtis Companies Inc Clinton Iowa
Farley & Loetscher Mfg Co Dubuque Iowa
Fordyce Lumber Co Fordyce Ark
Frost Lumber Industries Inc Shreveport 90 La
Goshen Sash & Door Co E Pure St Goshen Ind
Marquart Millwork Co 50 Ceape St Oshkosh Wis
Morgan Co Oshkosh Wis
Rock Island Millwork Co Rock Island Ill

BARBECUE EQUIPMENT & PARTS

Chattanooga Implement & Mfg Co 1st & Delmar Sts Chattanooga Tenn
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Ironcraft Inc (sub California Plow Co) Polhemus St San Jose 11 Cal
Superior Fireplace Co Dept 521 1708 E 15th St Los Angeles Cal & Dept 521 601 N Point Rd Baltimore Md
E A Vandy 14105 Merchandise Mart Chgo 54 Ill

BARN EQUIPMENT—farm

Badger Corrugating Co La Crosse Wis
Berg Equip Corp Marshfield Wis
Clay Equipment Corp Cedar Falls Ia
Coburn Mfg Co Whitewater Wis
Franklin Equipment Co Monticello Iowa
H D Hudson Mfg Co 589 E Illinois Chgo 11 Ill
James Mfg Co Fort Atkinson Wis
Louden Mach Co Fairfield Ia
F E Myers & Bro Co Ashland Ohio
Mitchell Mfg Co Milwaukee 7 Wis
The Ney Mfg Co 948 High Av S W Canton 4 Ohio
Starline Inc Harvard Ill

BASE BOARDS—rubber

Cass Products Co 6127 N Cicero Av Chicago 30 Ill

BASKETS—wire trash burning

Cyclone Fence Div American Steel & Wire Co U S Steel Corp Sub Box 260 Waukegan 1 Ill
Majestic Co 303-C Erie St Huntington Ind
F P Smith Wire & Iron Works 2340 Clybourn Av Chgo 14 Ill
Wheeling Corrugating Co Wheeling W Va

BATHTUB SEAL—vinyl plastic

Cass Products Co 6127 N Cicero Av Chicago 30 Ill
Walter Drake 193 Drake Bldg Colorado Springs 10 Colo

BATHROOM ACCESSORIES

Alloy Tile Corp 109 Roosevelt Av Belleville N J
The Autoyre Co Dept D Oakville Conn
Cass Prods Co 6127 N Cicero Av Chicago 30 Ill
Columbia Metal Box Co 260 E 143rd St NY 51 NY
Faries Mfg Co Decatur Ill
Gerity-Michigan Die Casting Co Adrian Mich
Walter S Kraus Co 48-02 43rd St Woodside L I N Y
F H Lawson Co 809 Evans St Cincinnati 4 Ohio
Miami Cabinet Div Philip Carey Mfg Co Dept AL-4 Middletown O
National Tile & Mfg Co Anderson Ind
Chas Parker Co Meriden Conn
S Parker Hdwe Mfg Corp 27 Ludlow St N Y 2 N Y
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Prestile Mfg Co 5850 W Ogden Chicago 50 Ill
Royal Glass Wks Corp 50-20 25th St L I C N Y
Walter E Selck & Co 225 W Hubbard Chgo 10 Ill
E C Smith Mfg Corp 1515 N Artesian Chgo 22 Ill
Stylon Corp 857 Commonwealth Av Boston 15 Mass
Toledo Desk & Fixture Co Dept MG-42 Maumee Ohio
Westwood Mfg Co 1420 S Evergreen Av Los Angeles 23 Calif

BATTERIES—farm lighting

Fairbanks Morse & Co 600 S Michigan Av Chgo Ill
Universal Battery Co 3410 S La Salle Chgo Ill

BEDS—disappearing

Evansville Metal Bed Co Evansville Ind
Holmes Mfg Co 211 N Madison Ave Los Angeles 4 Cal
Murphy Door Bed Co 30 N LaSalle Chgo 2 Ill
Roll-A-Way Corp 2954 N Sheffield Av Chicago 14 Ill
Superior Sleeprite Corp 2219 S Halsted Chgo Ill

BELT LACING EQUIPMENT

Chicago Belting Co 121 N Green St Chgo 7 Ill
Clipper Belt Lacer Co Grand Rapids 2 Mich
Flexible Steel Lacing Co 4607 Lexington Chgo 44 Ill
Chas A Schieren Co 30 Ferry St New York 7 N Y
Union Rubber & Asbestos Co Trenton N J
Webb Belting Co 1505 W 12th St Kansas City Mo

BELTING—conveyor

Acme Rubber Mfg Co P O Box 1001 Trenton N J
Cincinnati Rubber Mfg Co Franklin Av Cincinnati 13 Ohio
Geo Haiss Mfg Co Inc 381 Canal Pl Bronx 51 NY NY
Link-Belt Co 300 W Pershing Rd Chgo 9 Ill
New York Rubber Corp 100 Park Av New York 17 N Y

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Raybestos-Manhattan Inc Passaic N J
Republic Rubber Div Lee Rubber & Tire Corp Youngstown O
United States Rubber Co 1230 Avenue of the Americas NY 20 NY

BELTING—transmission

Acme Rubber Mfg Co Box 1001 Trenton N J
Cincinnati Rubber Mfg Co Franklin Av Cincinnati 12 Ohio
Graton & Knight Co Worcester 4 Mass
Raybestos-Manhattan Inc Passaic N J
Republic Rubber Div Lee Rubber & Tire Corp Youngstown O
Chas A Schieren Co 30 Ferry St NY 7
Union Rubber & Asbestos Co PO Box 1040 Trenton 6 N J
U S Rubber Co 1230 Avenue of the Americas NY 20 NY

BELTING DRESSING & CEMENT

Boyer Chemical Laboratory Co 2232 S Wabash Chgo 16 Ill
Cling-Surface Co 1032 Niagara St Buffalo 13 N Y (dressing only)
Jos Dixon Crucible Co Jersey City 3 N J
The B F Goodrich Co Akron Ohio
Richmond Belt Dressing Mfg Co Inc PO Box 5087 Richmond 20 Va (dressing only)
Warren Belting Co Inc 33 Arctic St Worcester 8 Mass
Webb Belting Co 1505 W 12th St Kansas City Mo

BINS—grain

Badger Corrugating Co LaCrosse Wis
Brainard Steel Co Warren 3 Ohio
Butler Mfg Co 13th & Eastern Av Kansas City 3 Mo
W E Caldwell Co Louisville 8 Ky
Evans Products Co Dept S-14 Plymouth Mich
Houston Blow Pipe & Sheet Metal Works Box 1692 Houston 1 Tex
Illinois Wire & Mfg Co PO Box A-1396 Joliet Ill
James Mfg Co Fort Atkinson Wis
Kalamazoo Tank & Silo Co Kalamazoo Mich
Midwest Steel Products Co Kansas City Mo (steel)

BINS—nail & bolt

Deluxe Metal Furniture Co Warren Pa
Equipto Div of Aurora Equipment Co 412 Cleveland Av Aurora Ill
Frick-Gallagher Mfg Co 250 S Board St Philadelphia Pa
Republic Steel Corp Berger Mfg Div Canton 5 Ohio
Stackbin Corp Providence R I
Universal Steel Equipment Corp 135 W 23rd NY NY

BITS, GIMLETS

E W Deuse Co Chester Conn
Mephisto Tool Co Inc Hudson NY
Peck Stow & Wilcox Co Southington Conn
The Stanley Wks New Britain Conn

BITS—saw

E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
R Hoe & Co Inc 910 E 138th St New York 54 N Y
Belsaw Machinery Co 315 Westport Rd Kansas City 2 Mo
Rockwell Mfg Co Delta Power Tool Div 693-D E Vienne Av Milwaukee Wis
Simonds Saw & Steel Co Fitchburg Mass
Southern Saw Wks Atlanta Ga
Yates-American Machine Co Beloit Wis

BLOCKS—tackle

American Hoist & Derrick Co 63 Robert St St Paul 1 Minn
Clyde Iron Works Inc Duluth 1 Minn
Lanebro Mfg Co 110 Main St Poughkeepsie N Y
The Ney Mfg Co 948 High Av S W Canton 4 Ohio
Upson-Walton Co Cleveland Ohio
Western Block Co Lockport N Y

BLOWER SYSTEMS—sawmill & planing mill

Allington & Curtis Mfg Co Saginaw Mich
Clarage Fan Co Kalamazoo 16 Mich
Houston Blow Pipe & Sheet Metal Works Box 1692 Houston Tex
Jacksonville Blow Pipe Jacksonville Fla
Kirk & Blum Mfg Co Cincinnati Ohio
Lane Mfg Co Montpelier Vt
Ohio Blow Pipe Co 1727 Doan Av Cleveland 12 Ohio
Westinghouse Elec Corp Sturtevant Div 118 Readville St Hyde Park Boston 36 Mass

BOARD—asbestos cement

Acme Asbestos Covering & Flooring Co 246 N Elizabeth Chicago 7 Ill
Asbestos Asphalt Insulation Co 2100 Fullerton Av Chicago 47 Ill
Philip Carey Mfg Co Dept AL-4 Lockland Cincinnati 15 Ohio
Homasote Co Dept 50-A Trenton 3 N J
Johns-Manville Corp 22 E 40th N Y 16 N Y
Keasbey & Mattison Co Ambler Pa
National Gypsum Co Buffalo N Y
The Ruberoid Co 500 5th Ave N Y 18 N Y

BOARD—asbestos cement, encased insulation

Asbestos Asphalt Insulation Co 2100 Fullerton Av Chicago 47 Ill
Celotex Corp 120 S LaSalle Chgo 3 Ill
Johns-Manville Corp Box 290 22 E 40th St New York 16 N Y
Owens-Corning Fiberglas Corp Nicholas Bldg Dept 64-D2 Toledo 1 Ohio

BOILERS—steam & hot water

Brownell Co 321 N Findlay St Dayton 1 O
Combustion-Engineering Superheater Inc 200 Madison Av New York 16 NY
Delco Appl Div General Motors Corp Rochester 1 N Y
Kewanee Boiler Corp Kewanee Ill
Kohler Co Kohler Wis
Lookout Boiler & Mfg Co Chattanooga 1 Tenn
R Munroe & Sons Mfg Corp Pittsburgh 22 Pa (hot water only)
National Radiator Co 221 Central Av Johnstown Pa
Penn Boiler & Burner Mfg Corp Box 1079 Lancaster Pa
Richmond Radiator Co 19 E 47th St New York 17 N Y
Ruud Mfg Co 2934 Smallman St Pittsburgh 1 Pa

BOLTS—barrel

Champion Hardware Co Geneva Ohio
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
P & F Corbin Div American Hdwe Corp New Britain Conn
Frantz Mfg Co Sterling Ill
Gensco Tool Div General Steel Warehouse Co Inc 1812 N Kostner Ave Chicago 39 Ill
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis 4 Mo
National Mfg Co Sterling Ill
S Parker Hardware Mfg Corp 27 Ludlow St New York 2 N Y
Penn Hardware Co Reading Pa
Russell & Erwin Div The American Hardware Corp New Britain Conn
The Stanley Works 195 Lake St New Britain Conn

BOLTS—carriage

Clark Bros Bolt Co Millidale Conn
The Lamson & Sessions Co 1971 W 85th St Cleveland 2 Ohio
Lewis Bolt & Nut Co Minneapolis 14 Minn
The Maryland Bolt & Nut Co Baltimore 9 Md
National Screw & Mfg Co Cleveland 4 Ohio
Pheoll Mfg Co 5700 Roosevelt Rd Chicago 50 Ill
Russell Burdsall & Ward Bolt & Nut Co Port Chester NY
St Louis Screw & Bolt Co 6900 N Broadway St Louis 15 Mo
Sterling Bolt Co 209 W Jackson Blvd Chgo 6 Ill

BOLTS—chain

Champion Hardware Co Geneva Ohio
P & F Corbin Div American Hardware Corp New Britain Conn
Frantz Mfg Co Sterling Ill
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis 4 Mo
Nat'l Brass Co Grand Rapids Mich
National Mfg Co Sterling Ill
S Parker Hardware Mfg Co 27 Ludlow New York 2 N Y
Penn Hardware Co Reading Pa
Richards-Wilcox Mfg Co Aurora Ill
Russell & Erwin Div The American Hardware Corp New Britain Conn
Safe Padlock & Hdw Co Lancaster Pa
St Louis Screw & Bolt Co 6900 N Broadway St Louis 15 Mo
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Standard Bronze Co Bayonne 8 N J
The Stanley Works 195 Lake St New Britain Conn

BOLTS—concrete

Ackerman-Johnson Co 625 W Jackson Blvd Chicago 6 Ill
Lamson & Sessions Co 1971 W 85th St Cleveland 2 Ohio
St Louis Screw & Bolt Co 6900 N Broadway St Louis 15 Mo
Star Expansion Products Co Inc 16 Cedar St N Y 6 N Y
Sterling Bolt Co 209 W Jackson Blvd Chicago 6 Ill

BOLTS—door & window

Adams-Rite Mfg Co 540 W Chevy Chase Dr Glendale 4 Cal
Casement Hdw Co 406 N Wood Chgo Ill
P & F Corbin Div The American Hdwe Corp New Britain Conn
Frantz Mfg Co Sterling Ill
Gensco Tool Div General Steel Warehouse Co Inc 1812 N Kostner Ave Chicago 39 Ill
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis 4 Mo
H B Ives Co New Haven 8 Conn
Lockwood Hdwe Mfg Co 35 Daniels St Fitchburg Mass
Nat'l Brass Co Grand Rapids Mich
Norwalk Lock Co 395 Broadway NY 13 NY
S Parker Hdwe Mfg Corp 27 Ludlow New York 2 N Y
Peabody Co Inc 5816 S Hooper Av Los Angeles 11 Cal
Russell & Erwin Div The American Hardware Corp New Britain Conn
Safe Pallock & Hdwe Co Lancaster Pa
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Standard Bronze Co Bayonne 8 N J
The Stanley Wks New Britain Conn

BOLTS—expansion

Ackerman-Johnson Co 625 W Jackson Blvd Chicago 6 Ill
Arro Expansion Bolt Co Box 388 Marion O
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Chicago Expansion Bolt Co 1338 W Concord Place Chicago 22 Ill
H B Ives Co New Haven Conn
Paine Co 2951 Carroll Av Chgo 12 Ill
Rawlplug Co Inc 271 Church St New York 13 N Y
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Star Expansion Products Co Inc 147 Cedar N Y 6 N Y
U S Expansion Bolt Co York Pa

BOLTS—foot

Champion Hardware Co Geneva Ohio
P & F Corbin Div American Hdwe Corp New Britain Conn
Frantz Mfg Co Sterling Ill
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis 4 Mo
The Lamson & Sessions Co Cleveland 2 Ohio
National Mfg Co Sterling Ill
S Parker Hardware Mfg Co 27 Ludlow St New York 2 N Y
Penn Hardware Co Reading Pa
Richards-Wilcox Mfg Co Aurora Ill
Russell & Erwin Div The American Hardware Corp New Britain Conn
Safe Padlock & Hardware Co Lancaster Pa
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
St Louis Screw & Bolt Co 6900 N Broadway St Louis 15 Mo
Sharon Hdwe Mfg Co Sharon Pa
The Stanley Works New Britain Conn

BOLTS—garage door

Allith-Prouty Inc Box 606 Danville Ill
P & F Corbin New Britain Conn
Frantz Mfg Co Sterling Ill
Gensco Tool Div General Steel Warehouse Co Inc 1812 N Kostner Ave Chicago 39 Ill
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis 4 Mo
Lamson & Sessions Co 1971 W 85th St Cleveland 2 Ohio
National Mfg Co Sterling Ill
Richards-Wilcox Mfg Co Aurora Ill
Russell & Erwin Div The American Hdwe Corp New Britain Conn
St Louis Screw & Bolt Co 6900 N Broadway St Louis 15 Mo
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Sharon Hdwe Mfg Co Sharon Pa
The Stanley Works New Britain Conn

BOLTS—machine

Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Columbia Nut & Bolt Co Bridgeport 3 Conn
Hubbard & Co 6301 Butler St Pittsburgh 1 Pa
The Lamson & Sessions Co 1971 W 85th St Cleveland 2 Ohio
Maryland Bolt & Nut Co Baltimore 9 Md
Pheoll Mfg Co 5700 W Roosevelt Rd Chgo 50 Ill
Rockford Bolt & Steel Co 126 Mill Rockford Ill
Russell Burdsall & Ward Bolt & Nut Co Port Chester NY
St Louis Screw & Bolt Co 6900 N Broadway St Louis 15 Mo
Sterling Bolt Co 209 W Jackson Blvd Chgo 6 Ill
Stronghold Screw Products Inc 222 W Hubbard Chicago 10 Ill

BOLTS—stove

Clark Bros Bolt Co Millidale Conn
Continental Screw Co 459 Mt Pleasant St New Bedford Mass
The Lamson & Sessions Co 1971 W 85th St Cleveland 2 Ohio
Maryland Bolt & Nut Co Baltimore 9 Md
Nat'l Screw & Mfg Co Cleveland O
Paine Co 2951 Carroll Av Chicago 12 Ill
Pheoll Mfg Co 5700 Roosevelt Rd Chgo 50 Ill
Reed & Price Mfg Co Worcester 1 Mass (slotted & recessed)
Rockford Screw Products Co 2501 9th St Rockford Ill
Russell Burdsall & Ward Bolt & Nut Co Port Chester NY
St Louis Screw & Bolt Co 6900 N Broadway St Louis 15 Mo
Sterling Bolt Co 209 W Jackson Blvd Chicago 6 Ill
United Screw & Bolt Corp Cleveland 2 O

BOLTS—toggle

Ackerman-Johnson Co 625 W Jackson Blvd Chicago 6 Ill
Arro Expansion Bolt Co Box 388 Marion O
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Chicago Expansion Bolt Co 1338 W Concord Place Chicago 22 Ill
Paine Co 2951 Carroll Av Chgo 12 Ill
Star Expansion Products Co Inc 147 Cedar N Y 6 N Y
United Screw & Bolt Corp Cleveland 2 O

BOOKS—calculating

All books listed below are for sale by AMERICAN LUMBERMAN INC.., 139 N. Clark St., Chicago 2, Ill.

Buyer and Seller by Baughman..	$ 8.00
Expert Lumber Pricer by Hiatt..	7.50
Handy Lumber Calculator.....	.50
Lightning Veneer Calculator by Vermeulen	5.00
Lumber Calculator by Solomon..	2.00
Lumberman's Actuary by Barry..	10.00
Lumberman's Ambidexter	3.50
Scribner's Lumber and Log Book	1.00
Simplex Price Book.....	3.00
Wood Workers Manual by Conrad	5.00

BOOKS—estimating and construction

Blueprint Reading by Dalzell, McKinney and Ritow.....	$ 1.50
Carpentry by Townsend.....	2.50
Cyclopedia of Building Terms....	.50
How to Estimate for the Building Trades by Townsend.....	5.50
Standard Moulding Book.....	1.00
Steel Square by Townsend.....	2.25
Steel Square Pocket Book by Stoddard	1.25
Technique in Ripsawing by Hyler	2.00

BOOKS—house designs, plans

Brown-Blodgett Co St Paul Minn
L F Garlinghouse Co Topeka Kan
Home Plan Book Co 1596 Selby Av St Paul 4 Minn
Housing Plan Service Inc Dept 102 140 Nassau St N Y 7 N Y
National Plan Service Inc 1315 W Congress Chgo 7 Ill
John Wiley & Sons Inc 440 Fourth Av New York 16 N Y
Wm H Wise & Co Inc 50 W 47th St New York 19 N Y

BOOKS—Lumber Grading Rule

Official grading rules for Hemlock and Tamarack lumber—adopted and published by Northern Hemlock and Hardwood Manufacturers Assn.	$ .50
Standard grading rules for Northern White Pine, Norway Pine, Jack Pine, Eastern Spruce, Western White Spruce, Balsam, Tamarack and Aspen Lumber — Northern Pine Manufacturers Association	.25
Rules for measurement and Inspection of Hardwood lumber, Cypress, Veneers and Thin lumber— National Hardwood Association	.25
Standard Grading and Dressing Rules for Douglas Fir, Sitka Spruce, West Coast Hemlock and Western Red Cedar Lumber. Approved by West Coast Bureau of Lumber Grades and Inspection..	.50
Standard Grading Rules for Southern Pine Lumber. Approved by SPIB and conforming to American Lumber Standards.....	.50

BOOKS—properties and utilization

Plywoods by Wood.....	4.00
Properties and Uses of Wood by Koehler	4.00
Timber Products and Industries by Brown	4.00

BOOKS—Wood Identification

Commercial Hardwood Identification by Reno-Kukachka.....$	1.00

BOXES—mortar mixing

American Sheet Metal Wks 331 N Alexander St New Orleans La
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Goldblatt Tool Co 1924 Walnut St Kansas City 8 Mo
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Muller Machinery Co Inc Metuchen N J
Newark Ladder & Bracket Co Inc 3 Walnut Av Clark (Rahway) N J

BOXES—tool

Goldblatt Tool Co 1924 Walnut St Kansas City 8 Mo

BRACES—garage door

Champion Hdw Co Geneva O
Fiwale Equipment Mfg Co 105 Reade St NY 13 NY
Chas O Larson Co Sterling Ill
National Mfg Co Sterling Ill
S Parker Hdwe Mfg Co 27 Ludlow New York 2 N Y
Sharon Hdwe Mfg Co Sharon Pa
Shelby Spring Hinge Co Shelby O
The Stanley Works New Britain Conn

BRACKETS—roof

Artcraft Ornamental Iron Co 724 E Hudson Columbus O
Belson Mfg Co 111 Franklin Aurora Ill
Cincinnati Iron Fence Co Inc 2110 Florence Av Cincinnati 6 Ohio
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Harvard Metal Products Inc 97-99 Reading St Roxbury 19 Mass
Holm's Mfg Co of Ohio 103 N Main St Akron 8 Ohio
Newark Ladder & Bracket Co Inc 3 Walnut Av Clark (Rahway) N J
The Stanley Works New Britain Conn
Wm J Samcoe Iron Co 917 Military Rd Kenmore 17 N Y

BRACKETS—sawhorse

Dalton Mfg Co Dept A-4 20 S Central Av St Louis 5 Mo
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Charles O Larson Co Sterling Ill
Grand Haven Stamped Products Co Grand Haven Mich
Wagner Mfg Co Dept ALG-52 Cedar Falls Iowa

BRACKETS—shelf

American Cabinet Hardware Corp Dept AL-47 Rockford Ill
Champion Hardware Co Geneva Ohio
Frantz Mfg Co Sterling Ill
Gensco Tool Div General Steel Warehouse Co Inc 1812 N Kostner Ave Chicago 39 Ill
Griffin Mfg Co Cherry & Huron Sts Erie Pa
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis 4 Mo
W C Heller & Co Cat #40A 1050 Bryant St Montpelier Ohio
Knape & Vogt Mfg Co Dept N40 658 Richmond St N W Grand Rapids 4 Mich
Chas O Larson Co Sterling Ill
Macklanburg-Duncan Co Oklahoma City 1 Okla
Miami Cabinet Div Philip Carey Mfg Co Middletown Ohio
National Mfg Co Sterling Ill
S Parker Hdwe Mfg Corp 27 Ludlow New York 2 N Y
Reflector Hardware Corp Dept ALD 2245 S Western Av Chicago 8 Ill
Slaymaker Lock Co 105 W End Av Lancaster Pa
The Stanley Works New Britain Conn

BRACKETS—wall

Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
A W Flint Co New Haven 6 Conn
Griffin Mfg Co Erie Pa
Harvard Metal Products Inc 97-99 Reading St Roxbury 19 Mass
W C Heller & Co Cat #40A 1050 Bryant St Montpelier Ohio
S Parker Hdwe Mfg Corp 27 Ludlow New York 2 N Y
Wm J Samcoe Iron Co 917 Military Rd Kenmore 17 N Y
Standard Bronze Co Bayonne 8 N J
Superior Plastics Div Commonwealth Plastics Inc 426 N Oakley Blvd Chgo 12 Ill
Valley Metal Products Marseilles Ill

BRAZERS—band saw

E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Prescott Co Menominee Mich

BRICK CARRIERS

Acme Brick Co Ft Worth 2 Texas
Adams Co Dubuque Iowa
Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Goldblatt Tool Co 1924 Walnut St Kansas City 8 Mo
Kewanee Mfg Co 452 Albur Av Kewanee Ill
A L Swett Iron Works Medina N Y
Vulcan Tool Mfg Co Quincy 69 Mass

BRICK—common

Acme Brick Co Ft Worth 2 Texas
Adel Clay Products Co Des Moines Ia
Baltimore Brick Co Baltimore 5 Md
Besser Mfg Co Alpena Mich
The Bowerston Shale Co Bowerston O
Claycraft Co Box 866 Columbus 16 Ohio
Denver Sewer Pipe & Clay Co Denver 1 Colo
Great Falls Brick Co Great Falls Mont
Illinois Brick Co 228 N LaSalle Chgo 1 Ill
Sealcon Products Inc Minneapolis 2 Minn
Sheffield Brick & Tile Co Sheffield Ia
Vulcan Tool Mfg Co 41 Liberty St Quincy 69 Mass
Washington Brick & Lime Co Box 2198 Spokane 6 Wash

BRICK—face

Acme Brick Co Ft Worth 2 Texas
Adel Clay Products Co Des Moines Ia
Baltimore Brick Co Baltimore 5 Md
The Bowerston Shale Co Bowerston O
Claycraft Co Box 866 Columbus 16 Ohio
Chicago Fire Brick Co 1461 N Elston Av Chgo 22 Ill
Denver Sewer Pipe & Clay Co Denver 1 Colo
Gladding McBean & Co 1275 Harrison St San Francisco 3 Calif
Great Falls Brick Co Great Falls Mont
Illinois Brick Co 228 N LaSalle St Chicago 1 Ill
Pacific Clay Products 306 W Avenue 26 Los Angeles 31 Cal
Sealcon Products Inc Minneapolis 2 Minn
Sheffield Brick & Tile Co Sheffield Ia
Washington Brick & Lime Co Box 2198 Spokane 6 Wash

BRICK—fire

Acme Brick Co Ft Worth 2 Texas
Chicago Fire Brick Co 1461 Elston Av Chicago 22 Ill
Clay City Pipe Co Lock Drawer 272 Uhrichsville O
Evans Pipe Co Uhrichsville Ohio
General Refractories Co Real Estate Trust Bldg Phil 7 Pa
A P Green Fire Brick Co Mexico Mo
Harbison Walker Refractories Co Farmers Bank Bldg Pittsburgh Pa
Illinois Brick Co 228 N LaSalle St Chicago 1 Ill
Laclede-Christy Co 1711 Ambassador Bldg St Louis 1 Mo
Mexico Refractories Co Mexico Mo
North American Refractories Co Cleveland 14 O
Norton Co 1 New Bond St Worcester 6 Mass

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Pacific Clay Products 306 W Av 26 Los Angeles 31 Cal
Plibrico Jointless Firebrick Co 1800 N Kingsbury Chgo 14 Ill
Robinson Clay Prod Co Akron Ohio
Seaboard Refractories Co Perth Arboy N J
Walsh Refractories Corp 101 Ferry St St Louis 7 Mo
Washington Brick & Lime Co Box 2198 Spokane 6 Wash

BRICK—glazed

Acme Brick Co Fort Worth 3 Texas
Denver Sewer Pipe & Clay Co Denver 1 Colo
Illinois Brick Co 228 N LaSalle St Chicago 1 Ill
Walsh Refractories Corp 101 Ferry St St Louis 7 Mo
Washington Brick & Lime Co Box 2198 Spokane 6 Wash

BRICKS—rubbing

American Emery Wheel Works Providence R I
Mid-West Abrasive Co 510 S Washington St Owosso Mich
Norton Co 1 New Bond St Worcester 6 Mass
Simonds Abrasive Co Philadelphia 37 Pa
Sterling Grinding Wheel Div of the Cleveland Quarries Co Tiffin Ohio

BRIDGING—steel

Cleveland Steel Specialty Co Inc 3765 E 91st St Cleveland 5 Ohio
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Flash Bridge Co Holland Michigan
Hosking Paper & Supply P O Drawer 43 Wilmette Ill
Lanebro Mfg Co 110 Main St Poughkeepsie N Y
Met-Cro Specialties Co Inc 87-31 78th St Woodhaven 21 N Y
Ohio Can & Crown Co Massillon Ohio
The Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Republic Steel Corp Cleveland 1 Ohio
Sheffield Steel Corp Sheffield Sta Kansas City Mo
Sta-Tite Inc 4020 Port Washington Rd Milwaukee Wis
Welco Co 952 Addison St Chicago 13 Ill

BRUSHES—household

American Brush Corp 1119 N Franklin Chgo 10 Ill
Devoe & Raynolds Co Inc Princeton Ind
J I Holcomb Mfg Co Indianapolis Ind
Howard Dustless Duster Co 80 Freeport St Dorchester 22 Mass
Illinois Duster & Brush Co 1944 Webster Av Chgo 14 Ill
Newark Brush Co Kenilworth N J
Pittsburgh Plate Glass Co Dept 3D Brush Div 3221 Frederick Av Baltimore 29 Md
Wooster Brush Co Wooster Ohio

BRUSHES—industrial

Devoe & Raynolds Co Inc Princeton Ind
Goldblatt Tool Co 1924 Walnut St Kansas City 8 Mo
Illinois Duster & Brush Co 1944 Webster Av Chgo 14 Ill
Manhattan Brush Co Inc Dept L-4 42 W 18th St New York 11 New York
Michigan Brush Mfg Co Inc Detroit Mich
National Brush Co Aurora Ill
The Osborn Mfg Co Cleveland 14 Ohio
Pittsburgh Plate Glass Co Brush Div 3221 Frederick Av Dept D-3 Baltimore 29 Md
Wooster Brush Co Wooster Ohio

BRUSHES—paint & varnish

Baker Brush Co Inc 75-87 Grand St NY 13 NY
Devoe & Raynolds Co Inc Princeton Ind
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Kurfees Paint Co 201 E Market St Louisville 3 Ky
Manhattan Brush Co Inc Dept L-4 42 W 18th St New York 11 New York
Newark Brush Co Kenilworth N J
The Osborn Mfg Co Cleveland 14 Ohio
Peaslee Gaulbert Paint & Varnish Co 223 N 15th St Louisville Ky
Pittsburgh Plate Glass Co Brush Div 3221 Frederick Av Dept D-3 Baltimore 29 Md
J C Pushee & Sons 700 Harrison Boston Mass
Rubberset Co Hayes Av & Lincoln Highway Newark 5 N J
Sewall Paint & Varnish Co 1306 River St Dallas 2 Texas
Whiting-Adams Co Inc 710 Harrison Av Boston Mass
Wooster Brush Co Wooster Ohio

BULKHEADS—cellar

The Bilco Co 180 Hallock Av New Woodside L I N Y

BURGLAR ALARMS

J H Bunnell & Co 215 Fulton NY NY
Edwards & Co Inc Norwalk Conn
Federal Elec Co 8706 S State Chgo Ill
Genl Burglar Alarm Co Inc 365 E 146th N Y 55 N Y
Guardian Elec Mfg Co 1400 W Washington Chgo Ill
Lyon Rural Electric Co San Diego 12 Calif

BURNERS—coal

Atlanta Stove Works Inc Atlanta Ga
Eagle Stove Works Rome Ga
Estate Stove Co Hamilton Ohio
Kol-Master Corp Oregon Ill
Leake Stove Co 114 W 11th St Kansas City 6 Mo
Locke Stove Co 114 W 11th St Kansas City 6 Mo
Majestic Co 102-D Erie St Huntington Ind
Quincy Stove Mfg Co Quincy Ill
Steel Prods Eng Co Combustioneer Div 1205 W Columbia St Springfield Ohio

BURNERS—gas

American Radiator & Standard Sanitary Corp Pittsburgh 22 Pa
Barber Gas Burner Co Cleveland O
Bryant Heater Co 17825 St Clair Av Cleveland 10 Ohio
Delco Appl Div Gen Motors Corp 391 Lyell Av Rochester 1 N Y
Hauck Mfg Co 124-136 10th St Brooklyn 15 N Y
The Heil Co 2000 W Montana St Milwaukee 1 Wis
Majestic Co 102-D Erie St Huntington Ind
Norge Heat Div Borg Warner Corp Detroit Mich
Queen Stove Wks Albert Lea Minn
Steel Prods Eng Co Combustioneer Div W Columbia St Springfield O
Surface Combustion Corp Toledo 1 Ohio
Wayne Home Equipment Co 801 Glasgow Av Ft Wayne Ind

BURNERS—oil

Bryant Heater Div Affiliated Gas Equipment Inc 17825 St Clair Av Cleveland 10 Ohio
Chrysler Corp Airtemp Div Dayton 1 Ohio
Delco Appl Div Gen Motors Corp 391 Lyell Av Rochester 1 N Y
Franklin Oil Heating Inc Columbus O
The Heil Co 3000 W Montana St Milwaukee 1 Wis
Kol-Master Corp Oregon Ill
H C Little Burner Co Inc 2nd & Lincoln San Rafael Cal
Majestic Co 102-D Erie St Huntington Ind
Norge Heat Div Borg-Warner Corp 672 E Woodbridge St Detroit 26 Mich
Silent Automatic Corp Detroit Mich
Silent Glow Oil Burner Corp Hartford Conn
Silent Sioux Oil Burner Corp Orange City Iowa
Simplex Oil Heating Corp 11 Park Pl NY 7 NY
Steel Prods Eng Co Combustioneer Div 1205 W Columbia St Springfield O
Timken Silent Automatic Div The Timken Detroit Axle Co Detroit 32 Mich
Wayne Home Equipment Co 801 Glasgow Av Ft Wayne Ind
Williams Oil-O-Matic Div Eureka Williams Corp Bloomington Ill

BURNERS—sawdust

Houston Blow Pipe & Sheet Metal Works Box 1692 Houston 1 Tex
Industrial Iron Works 6011 S W Macadam Av Portland 2 Ore
Seattle Boiler Wks 5237 E Marginal Way Seattle Wash
Western Fdry Co 2400 S W Water Av Portland 1 Ore

BURNERS—weed

American Steel Works 1211 W 27th St Kansas City 8 Mo
Aeroil Burner Co West New York N J
Cedarberg Mfg Co 545 S 4th St Minneapolis 15 Minn
Hauck Mfg Co 126 10th St Brooklyn 15 N Y
H D Hudson Mfg Co 589 E Illinois St Chicago Ill
Industrial Iron Wks PO Box 4625 Portland 2 Ore
D B Smith & Co 435 Main St Utica N Y

CABINETS—bathroom, metal

Bennett Mfg Co Alden N Y
Excel Metal Cabinet Co Jamestown N Y
Faries Mfg Co Decatur 70 Ill
Gold Seal Mfg Co 1228 W Kinzie Chgo 22 Ill
The Grote Mfg Co Inc Grote Square Bellevue Ky
Harris Inc 200 E Long St Columbus 15 Ohio
Ideal Cabinet Corp 7730 Joy Rd Detroit 4 Mich
The F H Lawson Co 809 Evans St Cincinnati 4 Ohio
Miami Cabinet Div Philip Carey Mfg Co Dept AL-4 Middletown O
Conant Bros Co Sommerville 44 Mass
Packard Formsteel Corp 3354 N Crawford Chgo 41 Ill
Chas Parker Co Meriden Conn
Ideal Cabinet Corp 7722 Joy Rd Detroit 4 Mich
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Royal Glass Works Corp 50-20 25th Long Island City 1 N Y
Walter E Selck & Co 225 W Hubbard Chicago 10 Ill
Shepler Mfg Co 1312 Sheffield St Pittsburgh 33 Pa
E C Smith Mfg Corp 1515 N Artesian Chgo 22 Ill
Standard Steel Cabinet Co 3701 N Milwaukee Av Chicago 41 Ill
Stylon Corp 857 Commonwealth Av Boston 15 Mass
Toledo Desk & Fixture Co Dept MG-42 Maumee Ohio
Toledo Plate & Window Glass Co 1041 Utica St Toledo 2 Ohio
United Metal Box Co 168 7th St Brooklyn N Y

CABINETS—bathroom, wood

Angel Novelty Co 340 Broad St Fitchburg Mass
Bel-Wood Mfg Co Ackerman Miss
Bilt-Rite Linoleum Products Inc 511 Whittier St New York 59 N Y
Cole Mfg Co P O Box 2657 Memphis Tenn
Curtis Companies Inc Clinton Ia
Dyke Bros Little Rock Ark
Huttig Mfg Co Muscatine Ia
S & N Kitchen Cabinet Co 698 Central Av Brooklyn 7 N Y
Long-Bell Lbr Co PO Box 1079 Longview Wash & R A Long Bldg Kansas City Mo
Farley & Loetscher Mfg Co Dubuque Ia
Ideal Co Box 889 Waco Tex
Kinzua Pine Mills Co Kinzua Ore
Walter S Kraus Co 48-02 43rd St Woodside N Y
Marquart Millwork Co Oshkosh Wis
Morgan Company Oshkosh Wis

CABINETS—display

Harris Prods Inc Amherst N H
Hartwig Inc 1105 N 4th St Milwaukee 3 Wis
Walter S Kraus Co 48-02 43rd St Woodside N Y
Chas O Larson Co Sterling Ill
Lyon Metal Products Inc 450 Madison Av Aurora Ill
Reflector Hardware Corp Dept ALD 2245 S Western Av Chicago 8 Ill Dept AL-4 Connersville Ind

CABINETS—fire equipment

W D Allen Mfg Co 566 W Lake Chgo 6 Ill
Elkhart Brass Mfg Co Elkhart Ind
Excel Metal Cabinet Co Jamestown N Y
Walter S Kraus Co 48-02 43rd St Woodside L I N Y
Safety Fire Extinguisher Co 293 7th NY NY
Wirt & Knox Mfg Co Phil Pa

CABINETS—general household

Angel Novelty Co Fitchburg Mass
Carr Adams & Collier Co Dubuque Ia
Crane Co 836 S Michigan Av Chicago 5 Ill
Curtis Cos Inc Clinton Ia
Excel Metal Cabinet Co Inc Jamestown N Y
Harris Prods Inc Amherst N H
Grote Mfg Co Inc Grete Sq Bellevue Ky
Long-Bell Lbr Co PO Box 1079 Longview Wash & R A Long Bldg Kansas City Mo
Morgan Co Oshkosh Wis
Salmanson & Co Inc 1107 Broadway New York 10 N Y

CABINETS—kitchen, metal

Acme Metal Products Corp Box 327 Blue Island Ill
American Central Div Avco Mfg Co Dept AL-4 Connersville Ind

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Capitol Kitchens Div of Hubeny Bros Inc 620 E 1st Av Roselle N J
Crane Co 836 S Michigan Av Chicago 5 Ill
Elgin Stove & Oven Div of Acme Visible Records Inc 122 S Michigan Av Chgo 3 Ill
Elkay Mfg Co 1874 S 54th Av Chgo 50 Ill
Excel Metal Cabinet Co Jamestown N Y
General Electric Co 1 River Rd Schenectady 5 N Y
Geneva Modern Kitchens Geneva Ill
Gold Seal Mfg Co 1228 W Kinzie Chgo 22 Ill
Hotpoint Inc 5600 W Taylor St Chicago 44 Ill
Lyon Metal Products Inc Aurora Ill
Miller Metal Products Inc 2215 Russell St Baltimore 30 Md
Mullins Mfg Corp Warren O
Murray Corp of America Scranton 2 Pa
Ohio Window Glass Co 4045 St Clair Av Cleveland Ohio
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Republic Steel Corp Berger Mfg Div Canton 5 Ohio
Shirley Corp 330 E St Joseph St Indianapolis 2 Ind
Toledo Desk & Fixture Co Dept MG-42 Maumee Ohio
Tracy Mfg Co 3125 Preble Av Pittsburgh 12 Pa
Universal-Rundle Corp New Castle Pa

CABINETS—kitchen, wood

Angel Novelty Co 340 Broad St Fitchburg Mass
Bel-Wood Mfg Co Ackerman Miss
Bilt-Rite Linoleum Products Inc 511 Whittier St New York 59 N Y
Carr Adams & Collier Co Dubuque Ia
Cole Mfg Co P O Box 2657 Memphis 2 Tenn
Curtis Companies Inc Clinton Ia
Dyke Bros Little Rock Ark
Farley & Loetscher Mfg Co Dubuque Ia
General Wood Works Council Bluffs Ia
Goshen Sash & Door Co E Purl St Goshen Ind
Gregg & Son Nashua N H
Huttig Mfg Co Muscatine Ia
Huttig Sash & Door Co 1206 S Vandeventer Av St Louis 10 Mo
Ideal Co Box 889 Waco Tex
I-XL Furniture Co Inc 410-424 N Main St Goshen Ind
Kinzua Pine Mills Co Kinzua Ore
Kitchen Maid Corp Andrews Ind
Walter S Kraus Co 48-02 43rd St Woodside N
Long-Bell Lbr Co PO Box 1079 Longview Wash & R A Long Bldg Kansas City Mo
S & N Kitchen Cabinet Co 698 Central Av Brooklyn 7 N Y
The Mengel Co Inc 2302 S 4th St Louisville 1 Ky
Morgan Co Oshkosh Wis
Mutschler Bros Co Nappanee Ind
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa

CABINETS—shower bath

Crane Co 836 S Michigan Av Chicago 5 Ill
Fiat Metal Mfg Co 9301 Belmont Franklin Park Ill
Milwaukee Stamping Co 800 S 72nd St Milwaukee 14 Wis
Northwest Metal Products Inc 55 Spokane St Seattle 4 Wash
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Royal Glass Works Corp 50-20 25th St Long Island City N Y
Standard Steel Cabinet Co 3701 N Milwaukee Av Chicago Ill
Tiletone Co 2323 N Wayne Chicago 14 Ill
Henry Weis Mfg Co Inc 307 Oak Elkhart Ind

CABLE—insulated

Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
General Electric Co Schenectady N Y
Hazard Insulated Wire Works Div of The Okonite Co Wilkes-Barre Pa
Tennessee Coal Iron & RR Co U S Steel Corp Sub Box 2634 Birmingham 2 Ala
U S Rubber Co 1230 Avenue of the Americas NY 20 NY

CALCIMINE

Carbola Chemical Co Inc Natural Bridge N Y
Ewing M Fox Co 240 E 136 NY NY
John Lucas & Co Phil Pa
Benjamin Moore & Co 511 Canal NY NY
Muralo Co Inc 566 Richmond Terrace Staten Isl N Y
Sewall Paint & Varnish Co 1306 River St Dallas 2 Tex
The Reardon Company St Louis 6 Mo
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill
U S Kalsomine Co 50 Church NY NY
Wadsworth Howland & Co 141 Federal Boston Mass
Wesco Waterpaints Inc 5th & Grayson Sts Berkeley 10 Calif

CALCIUM CHLORIDE

Coopers Creek Chemical Corp West Conshohocken Pa
The Dow Chemical Co Midland Mich
Gordon Chemical Co Inc 1100 Hickory St Kansas City 7 Mo
A C Horn Co Inc 10th St & 44th Ave Long Island City 1 N Y
Pennsylvania Salt Mfg Co Philadelphia 7 Pa
Pittsburgh Plate Glass Co Columbia Chemical Div 5th Av at Bellefield Pittsburgh 13 Pa
Solvay Sales Div Allied Chemical & Dye Corp 40 Rector N Y 6 N Y
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill

CALENDARS

Brown Blodgett Co St Paul Minn
Economy Novelty & Printing Co 225 W 39th N Y 18 N Y
L F Grammes & Sons Inc Allentown Pa (metal backed only)
The Kemper Thomas Co Cincinnati 12 Ohio
The Thos D Murphy Co Red Oak Iowa
Parisian Novelty Co 3510 S Western Av Chicago 9 Ill
Shedd Brown Mfg Co Minneapolis Minn

CANOPIES—metal

Aluminum Awning Co Div of Orchard Bros Inc Rutherford N J
Childers Mfg Co 625 Yale St Houston Tex
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Fawsco Mfg Div of Falls Stamping & Welding Co 1701 Front St Cuyahoga Falls Ohio
Leigh Building Products Div of Air Control Products Inc Coopersville Mich
The Maco Corp Huntington Ind
Newman Brothers Inc 660 W 4th St Cincinnati 3 Ohio
F C Russell Co 1100 Chester Av Dept 7-AL-42 Cleveland 1 Ohio
F P Smith Wire & Iron Works 2340 Clybourn Av Chicago 40 Ill
United Metal Products Inc Akron 11 Ohio
Wolfe Products Inc 765 Miami St Akron O

CANVAS, CANVAS PRODUCTS

American Tent & Awning Co 1132 Mission St San Francisco 3 Calif
The Astrup Co 2937 W 25th St Cleveland 13 Ohio
Bemis Bros Bag Co 111 N 4th St St Louis 2 Mo
Canvas Products Co 1240 S 7th St St Louis 4 Mo
Canvas Specialty Co PO Box 937 Hartford Conn
Clifton Mfg Co PO Drawer 2029 Waco Tex
Fulton Bag & Cotton Mills Co Atlanta 1 Ga
New York Drop Cloth Mfg Co 10-57 Jackson Av Long Island City 1 N Y
Standard Awning Co 83 Avon St Hartford 5 Conn
Wm W Stanley Co Inc 401 Broadway N Y 13 N Y
Tucker Duck & Rubber Co Fort Smith Ark
Werner Canvas Products Co 609 Bergen Brooklyn 17 N Y

CANVAS—washable, wall

The Astrup Co 2937 W 25th St Cleveland 13 Ohio
Canvas Specialty Co PO Box 937 Hartford Conn
Fulton Bag & Cotton Mills Atlanta 1 Ga

CAPS—advertising

The Astrup Co 2937 W 25th St Cleveland 13 Ohio
Economy Novelty & Printing Co 225 W 39 N Y 18 N Y
Kemper Thomas Co Cincinnati O
Minnesota Specialty Co 119 N 4th St Minneapolis 1 Minn
New York Adv Cap Co Inc 396 Broadway NY NY
Standard Awning Co 83 Avon St Hartford 5 Conn

CAR DOOR OPENER

R R Howell Co Minneapolis 14 Minn
The Nolan Co Bowerston O

CAR MOVERS, PULLERS

Advance Car Mover Co Appleton Wis
American Hoist & Derrick Co 63 S Robert St St Paul 1 Minn
Jeffrey Mfg Co 827 N 4th St Columbus 16 Ohio
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Leitelt Iron Wks Grand Rapids 2 Mich
Link-Belt Co 301 W Pershing Rd Chicago 9 Ill
Silent Hoist & Crane Co 860 63rd St Brooklyn 20 N Y

CAR DOOR LUMBER ROLLERS

American Logging Tool Co Evart Mich
Arnold J. Schuchardt 117 Frederick Oskosh Wis

CARRIAGES—sawmill

Allis Chalmers Mfg Co Milwaukee Wis
Cunningham Machinery Corp 735 Ricou St Shreveport La
Enterprise Co Columbiana O
The Filer & Stowell Co 147 E Becher St Milwaukee 7 Wis
R R Howell Co Minneapolis 14 Minn
Prescott Co Menominee Mich

CARS—lumber transfer

American Mfg Co Inc 2119 Pacific Av Tacoma 2 Wash
Moore Dry Kiln Co 1220 W State St Jacksonville 1 Fla
Standard Dry Kiln Co 798 S Harding St Indianapolis Ind

CARTS—fire hose

W D Allen Mfg Co 566 W Lake Chgo 6 Ill
Safety Fire Extinguisher Co 293 7th NY NY
Wirt & Knox Mfg Co Phil Pa

CASINGS—metal

Alabama Metal Lath Co PO Box 992 Birmingham Ala
Ceco Steel Prods Corp 5601 W 26th St Chicago 50 Ill
Detroit Steel Prods Co Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
Drywall Trim Inc 545 Fifth Av New York 17 N Y
Inland Steel Prods Co 4027 W Burnham Milwaukee 1 Wis
Malleable Iron Fittings Co Branford Conn

CASTERS

The Fairbanks Co 393 Lafayette St NY 3 NY
Hamilton Caster & Mfg Co Hamilton Ohio
Nutting Truck & Caster Co 1125 West Division St Fairbault Minn
Reflecto Letters Inc 411 E 101st St New York 29 N Y
Service Caster & Truck Corp 500 N Brownswood Av Albion Mich

CATCHES

Akron Hdwe Mfg Corp 32-01 57th St Woodside L I N Y
Ajax Hdwe Mfg Corp Dept 2A 4351 Valley Blvd Los Angeles 32 Calif
American Brass Goods Co 158 Cottage Grove S W Grand Rapids 2 Mich
American Cabinet Hdwe Corp Dept AL-47 Rockford Ill
P & F Corbin Div The American Hdwe Corp New Britain Conn
Corbin Cabinet Lock Div The American Hdwe Corp New Britain Conn
Engineered Products Co Flint 4 Mich
Ideal Brass Works 250 E 5th St St Paul 1 Minn
H B Ives Co New Haven 8 Conn
Laboratory Equipment Corp Hilltop Rd St Joseph Mich
Nat'l Brass Co Grand Rapids Mich
National Lock Co Rockford Ill
The Ney Mfg Co 940 High Av S W Canton 4 Ohio (barn door)
Peabody Co Inc 5816 S Hooper Av Los Angeles 11 Cal
Russell & Erwin Div The American Hdw Corp New Britain Conn
Safe Padlock & Hdwe Co Lancaster Pa
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Slaymaker Lock Co 105 W End Av Lancaster Pa
Standard Bronze Co Bayonne 8 N J
The Stanley Wks New Britan Conn

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CAULKING COMPOUND

The Armstrong Co 4065 S LaSalle St Chicago 9 Ill
Robert N Baltz & Co 1009 Harvard Terrace Evanston 6 Ill
The Biddle Co 612 S Main St St Louis 2 Mo
Calbar Paint & Varnish Co 2612-26 N Martha St Philadelphia 25 Pa
Ceresit Waterproofing Corp 3227 So Shields Chgo Ill
Chemical Supply Co 225 Plymouth Bldg Cleveland 15 Ohio
Devoe & Raynolds Co Inc Dept A-5 787 First Av N Y 17 N Y
Dicks-Pontius Co Dayton O
Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Gibson-Homans Co Dept AL 2367 Woodhill Rd Cleveland Ohio
Goldblatt Tool Co 1924 Walnut St Kansas City 8 Mo
Gordon Chemical Co Inc 1100 Hickory St Kansas City 7 Mo
John H Graham & Co 105 Duane St New York 8 N Y
Harris Inc 200 E Long St Columbus 15 Ohio
A C Horn Co 10th St & 44th Av Long Island City 1 N Y
Macklanburg - Duncan Co Oklahoma City 1 Okla
Miracle Adhesives Corp 214 E 53rd St New York 22 N Y
Ira Parker & Sons Co Oshkosh Wis
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 22 Pa
Plastic Products Co 6467 Georgia Av Detroit 11 Mich
Plastoid Prods Co 518 City Park Av New Orleans 19 La
Seal Rite Caulking Co Inc 6335 Lyndon St Detroit 21 Mich
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Steelcote Mfg Co 3418 Gratiot St St Louis 3 Mo
Tamms Industries Inc 228 N LaSalle St Chgo 1 Ill
Tremco Mfg Co Cleveland O
W F Webster Cement Co 224 Thorndike St Cambridge 41 Mass
Williams Prods Co Inc 6127-37 Cedar Av Philadelphia 43 Pa
X-Pando Corp 43-15 36th St Long Island City 1 N Y

CAULKING GUNS

The Armstrong Co 4065 So LaSalle St Chicago 9 Ill
The Bidlle Co 612 S Main St St Louis 2 Mo
Calbar Paint & Varnish Co 2612 N Martha Phil 25 Pa
Ceresit Waterproofing Corp 3227 S Shields Av Chicago 16 Ill
Dicks-Pontius Co Dayton O
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Glaziers' Tool Mfg Co 611 W Adams Chicago 6 Ill
Goldblatt Tool Co 1924 Walnut St Kansas City 8 Mo
Gordon Chemical Co Inc 1700 Hickory St Kansas City 7 Mo
A C Horn Co 10th St & 44th Av Long Island City N Y
Macklanburg-Duncan Co Oklahoma City 1 Okla
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Plastic Products Co 6467 Georgia Av Detroit 11 Mich
Plastoid Prods Co 518 City Park Av New Orleans 19 La
Seal Rite Caulking Co Inc 6335 Lyndon St Detroit 21 Mich
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill
Vital Products Mfg Co 7500 Quincy Av Cleveland 4 Ohio
X-Pando Corp 43-15 36th St Long Island City 1 N Y

CAULKING—pre-moulded

Cass Products Inc 6127 N Cicero Av Chicago 30 Ill
Fabricated Products Co Box 8005 Pittsburgh 16 Pa
Plastic Products Co 6467 Georgia Av Detroit Mich
Plastoid Prods Co 518 City Park Av New Orleans 19 La
Presstite Engineering Co 3900 Chouteau Av St Louis 10 Mo

CEMENT—air-entraining

Alpha Portland Cement Co 15 S Third St Easton Pa
Louisville Cement Co Inc 501 S 2nd St Louisville 2 Ky
Marquette Cement Mfg Co 20 N Wacker Dr Chicago 6 Ill
Medusa Portland Cement Co 1000 Midland Bldg Cleveland 15 Ohio
Trinity Div General Portland Cement Co 111 W Monroe St Rm 905 Chicago 3 Ill
Universal Atlas Cement Co 100 Park Av New York 17 N Y

CEMENT—asbestos

Acme Asbestos Covering & Flooring Co 246 N Elizabeth Chgo 7 Ill
Asbestos Asphalt & Insulation Inc 2100 Fullerton Av Chicago 47 Ill
Philip Carey Mfg Dept AL-4 Cincinnati 15 Ohio
Curtis Mfg & Asbestos Co 29 Lewis Wharf Boston 10 Mass
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
Johns-Manville Corp Box 290 22 E 40th N Y 16 N Y
Keasbey & Mattison Co Ambler Pa
Pecora Paint Co Inc American & Venango St Philadelphia 40 Pa
Plastic Products Co 6467 Georgia Av Detroit Mich
Plibrico Jointless Firebrick Co 1800 N Kingsbury Chicago 14 Ill
The Ruberoid Co 500 Fifth Av N Y 18 N Y
Standard Asbestos Mfg Co 860 W Evergreen Av Chicago 22 Ill
Steelcote Mfg Co 3418 Gratiot St St Louis 3 Mo

CEMENT—iron

Ceresit Waterproofing Corp 3227 S Shields Av Chicago 3 Ill
Clark Cast Steel Cement Co 2612 W 17th Wilmington 73 Del
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Ranetite Mfg Co Inc 1917 S Broadway St Louis Mo
Smooth-On Mfg Co 572 Communipaw Av Jersey City 4 N J
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Tilette Cement Co Inc 401 Lafayette St New York 3 N Y

CEMENT—mortar

Alpha Portland Cement Co Easton Pa
The Carey Co Inc Mankato Minn
Lehigh Portland Cement Co Allentown Pa
Louisville Cement Co Inc 501 S 2nd St Louisville 2 Ky
Marquette Cement Mfg Co 20 N Wacker Drive Chicago 6 Ill
Medusa Portland Cement Co 1000 Midland Bldg Cleveland 15 Ohio
Riverton Lime & Stone Co Inc Riverton Va
Southern Cement Co 608 Protective Life Bldg Birmingham 3 Ala
Trinity Div General Portland Cement Co 111 W Monroe St Rm 905 Chicago 3 Ill
Universal Atlas Cement Co 100 Park Av New York 17 N Y
X-Pando Corp 43-15 36th St Long Island City 1 N Y

CEMENT—pipe mending

Lake Chemical Co 162-P N Clinton St Chgo 6 Ill
Smooth-On Mfg Co 572 Communipaw Av Jersey City 4 N J
X-Pando Corp 43-15 36th St Long Island City 1 N Y

CEMENT—Portland

Calif Portland Cement Co Los Angeles Cal
Dewey Portland Cement Co 310 Ward Pkwy Kansas City 2 Mo
Florida Portland Cement Co Tampa Fla
Huron Portland Cement Co 1325 Ford Building Detroit 26 Mich
Kosmos Portland Cement Co Louisville Ky
Lehigh Portland Cement Co Allentown Pa
Lone Star Cement Corp 342 Madison Av NY NY
Louisville Cement Co Inc 501 S 2nd St Louisville 2 Ky
Marquette Cement Mfg Co 20 N Wacker Dr Chicago 6 Ill
Medusa Portland Cement Co 1000 Midland Bldg Cleveland 15 Ohio
Trinity Div General Portland Cement Co 111 W Monroe St Rm 905 Chicago 3 Ill
Universal Atlas Cement Co 100 Park Av New York 17 N Y

CEMENT—Portland, white

Louisville Cement Co Inc Speed Bldg Louisville 2 Ky
Medusa Portland Cement Co 1000 Midland Bldg Cleveland 15 Ohio
Trinity Div General Portland Cement Co 111 W Monroe St Rm 905 Chicago 3 Ill
Universal Atlas Cement Co US Steel Corp Sub 135 E 42nd St N Y 17 N Y

CEMENT—refractory

Acme Brick Co Ft Worth 2 Tex
Carborundum Co Niagara Falls N Y
Chicago Fire Brick Co 1461 Elston Av Chgo 22 Ill
Clay City Pipe Co Lock Drawer 272 Uhrichsville O
Curtis Mfg & Asbestos Co 29 Lewis Wharf Boston 10 Mass
Denver Fire Clay Co Box 5510 Denver Colo
Dewey Portland Cement Co 310 Ward Pkwy Kansas City 2 Mo
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Ehret Magnesia Mfg Co Inc Valley Forge Pa
Gen'l Refractories Co Phil Pa
A P Green Fire Brick Co Mexico Mo
Harbison Walker Refractories Co Farmers Bank Bldg Pittsburgh Pa
Keystone Refractories Co 120 Liberty St NY 6 NY
Laclede-Christy Co 1711 Ambassador Bldg St Louis 1 Mo
Mexico Refractories Co Mexico Mo
North American Refractories Co Cleveland 14 O
Norton Co 1 New Bond St Worcester 6 Mass
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Plastic Products Co 6467 Georgia Av Detroit Mich
Plibrico Jointless Firebrick Co 1800 N Kingsbury Chgo 14 Ill
Robinson Clay Prod Co Akron O
Sauereisen Cements Co 2218 Sharpsburg St Pittsburgh 15 Pa
Seaboard Refractories Co Perth Amboy N J
Walsh Refractories Corp 101 Ferry St St Louis 7 Mo

CEMENT—roofing

Abesto Mfg Corp Michigan City Ind
Asbestos Asphalt Insulation Inc 4700 Fullerton Av Chicago 47 Ill
Acme Asbestos Covering & Flooring Co 246 N Elizabeth Chgo 7 Ill
Acorn Refining Co 8001 Franklin Blvd Cleveland O
Barrett Div Allied. Chemical & Dye Corp 40 Rector N Y 6 N Y
Bird & Son Inc Dept AL-4 East Walpole Mass
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Curtis Mfg & Asbestos Co 29 Lewis Wharf Boston 10 Mass
The Dad & Lad Co New Lenox Ill
Devoe & Raynolds Co Inc 787 First Av New York 17 N Y
Ford Roofing Products Co 188 W Randolph Chicago 1 Ill
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Gibson-Homans Co 2367 Woodhill Rd Cleveland Ohio
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
Hydrochem Co 3540 Norton Rd Cleveland 11 Ohio
Johns-Manville Corp Box 290 22 E 40th N Y 16 N Y
Keasbey & Mattison Co Ambler Penna
Keystone Asphalt Products Co 101 E Ontario St Chicago 11 Ill
Koppers Co Inc Tar Products Div Pittsburgh 19 Pa
Pacbo Products Inc 475 Brannan St San Francisco Cal
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Ruberoid Co 500 Fifth Av New York 18 N Y
Rutland Fire Clay Co Rutland Vt
Servicised Products Corp 6051 W 65th St Chicago 38 Ill
Tamco Asphalt Products Inc 601 N High Joplin Mo
The Texas Co 135 E 42nd St New York 17 N Y
U S Gypsum Co 300 W Adams St Chicago 6 Ill
United Gilsonite Laboratories Scranton 1 Pa

CEMENT—rubber

Acorn Adhesives & Supply Co 678 Clover St Los Angeles 31 Cal
Broadway Rubber Mfg Co 529 E Broadway Louisville 2 Ky

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Crescent Products Co 315 N 14th St Terre Haute Ind
The Las-Stik Mfg Co B & Wayne sts Hamilton Ohio
Minnesota Mining & Mfg Co St Paul 6 Minn
Miracle Adhesives Corp 214 E 53rd St New York 22 N Y
Goodloe E Moore Inc Danville Ill
Nukem Prods Corp 111 Colgate Av Buffalo N Y
Paisley Prods Inc 1770 Canalport Av Chicago 16 Ill
St Louis Rubber Cement Co Inc St Louis Mo
Standard Paste & Glue Co Inc 3620 W 38th St Chgo Ill
Union Rubber & Asbestos Co Trenton N J
U S Rubber Co 1230 Avenue of the Americas New York 20 N Y
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
W F Webster Cement Co 224 Thorndike St Cambridge 41 Mass

CEMENT—tile

Acorn Adhesives & Supply Co 678 Clover St Los Angeles 31 Cal
The Armstrong Co 4065 So LaSalle St Chicago 9 Ill
Alloy Tile Corp 109 Roosevelt Av Belleville N J
Hayes Adhesives Co St Louis 15 Mo
Miracle Adhesives Corp 214 E 53rd St New York 22 N Y
The Borden Co Chemical Div 350 Madison Av New York 17 N Y
East Coast Tileboard Corp 41 Wyckoff Av Brooklyn 37 N Y
Goodloe E Moore Inc Danville Ill
Marsh Wall Products Inc 441 Main St Dover O
Nukem Prods Corp 111 Colgate Av Buffalo N Y
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Prestile Mfg Co 5850 Ogden Av Chgo 50 Ill
Reardon Co 2nd & Clinton Sts St Louis 6 Mo
Schalk Chemical Co 351 E Second St Los Angeles 12 Cal
Superior Wall Products Co 4401 N American St Philadelphia 40 Pa
Walter E Selck & Co 225 W Hubbard Chicago 10 Ill
Standard Paste & Glue Co Inc 3620 W 38th St Chgo Ill
Technical Supply Co 1911 University Av Palo Alto Calif
Tilette Cement Co Inc 401 Lafayette St New York 3 N Y
Tylac Co Monticello Ill
Wallace Mfg Co 10th & Fayette Kansas City Mo
W F Webster Cement Co 224 Thorndike St Cambridge 41 Mass

CEMENT—waterproofing

Adensite Co Inc 37-19 23rd St Long Island City N Y
American Fluresit Co Inc 4011 Red Bank Rd Cincinnati 27 Ohio
American Sta-Dri Co Brentwood Md
The Barrett Div Allied Chemical & Dye Corp 40 Rector St New York 6 N Y
Bird & Son Inc Dept AL-4 East Walpole Mass
Philip Carey Mfg Co Dept AL-4 Cincinnati 15 Ohio
Ceresit Waterproofing Corp 3227 So Shields Chgo Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Donley Bros 13928 Miles Av Cleveland 5 Ohio
Haynes Products Co 4007 Farnam St Omaha 3 Nebr
Gibson-Homans Co 2367 Woodhill Rd Cleveland Ohio
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
Johns-Manville Corp Box 290 22 E 40th N Y 16 N Y
Koppers Co Inc Tar Products Div Pittsburgh 19 Pa
Lastik Products Co Keenan Bldg Pittsburgh 22 Pa
Louisville Cement Co Inc 501 S 2nd St Louisville 2 Ky
Medusa Portland Cement Co 1000 Midland Bldg Cleveland 15 Ohio
Mixtite Corp North Haven Conn
Goodloe E Moore Inc PO Box 846 Danville Ill
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Ranetite Mfg Co Inc 1917 S Broadway St Louis Mo
Samuel Cabot Inc 420 Oliver Bldg Boston 9 Mass
Sealcon Products Inc Minneapolis 2 Minn
Smooth-On Mfg Co 572 Communipaw Av Jersey City 4 N J
Standard Dry Wall Products Inc PO Box X New Eagle Pa
Steelcote Mfg Co 3418 Gratiot St St Louis 3 Mo
Tamco Asphalt Products Inc 601 N High Joplin Mo
Tamms Industries Inc 228 N LaSalle St Chicago 1 Ill
The Texas Co 135 E 42nd St New York 17 N Y
Trinity Div General Portland Cement Co 111 W Monroe St Rm 905 Chicago 3 Ill
Truscon Laboratories Inc Box 69 Milwaukee Junction PO Detroit 11 Mich
Universal Atlas Cement Co 100 Park Av New York 17 N Y
Waxed Silicone Prods Inc 5028 N W 7th Av Miami 37 Fla
Webb Products Co San Bernardino Calif
X-Pando Corp 43-15 36th St Long Island City 1 N Y

CHAIN—conveyor

American Chain Div American Chain & Cable Co Inc York Pa
Bridgeport Chain & Mfg Co Bridgeport 1 Conn
Campbell Chain Co York Pa
Chain Belt Co 1600 W Bruce St Milwaukee 4 Wis
The Cleveland Chain & Mfg Co Broadway & Henry St Cleveland 5 Ohio
Diamond Chain Co Inc 402 Kentucky Av Dept 450 Indianapolis 7 Ind
Jeffrey Mfg Co 827 N 4th St Columbus 16 Ohio
Link-Belt Co 300 W Pershing Chicago Ill
Morse Chain Co 7601 Central Ave Detroit 8 Mich
Northern Conveyor Co P O Box 46 Janesville Wis
S G Taylor Chain Co 3-141st St Hammond Ind
Western Chain Co 1807 Belmont Av Chicago 13 Ill

CHAIN—sash, transom

American Chain Div American Chain & Cable Co Inc York Pa
Bridgeport Chain & Mfg Co Bridgeport Conn
The Cleveland Chain & Mfg Co Broadway & Henry St Cleveland 5 Ohio
Esco Chain Wks 309 E 22nd NY NY
Hodell Chain Co Cooper Av at E 40th St Cleveland 3 O
Peerless Chain Co Winona Minn
Royal Glass Wks Corp 50-20 25th St Long Island City N Y
John M Russell Mfg Co Inc Naugatuck Conn
S G Taylor Chain Co Hammond Ind
Turner & Seymour Mfg Co Torrington Conn
Western Chain Co 1807 W Belmont Av Chicago 13 Ill
Western Foundry Co Portland 1 Ore

CHAIN DRIVES

Diamond Chain Co Inc 402 Kentucky Av Dept 450 Indianapolis 7 Ind
R R Howell Co Minneapolis 14 Minn
Morse Chain Co 7601 Central Av Detroit 8 Mich
Ramsey Chain Co Albany N Y
Webb Belting Co 1505 W 12th St Kansas City Mo
Western Foundry Co Portland 1 Ore
The Wheland Co Chattanooga 2 Tenn

CHALK, CRAYONS, CARPENTER'S CHALK

Goldblatt Tool Co 1924 Walnut St Kansas City 6 Mo

CHALK LINES

Cedarberg Mfg Co 545 S 4th St Minneapolis 15 Minn
Cleveland Mill & Power Co Lawndale N C
Joseph Sixon Crucible Co Wayne & Monmouth Sts Jersey City 3 N Y
B F Gladding & Co South Otselic N Y
Goldblatt Tool Co 1924 Walnut St Kansas City 8 Mo
John H Graham & Co Inc 105 Duane St New York 8 N Y
South Eastern Cordage NBC Bldg Cleveland 15 O
Tennessee Line & Twine Co Elizabethton Tenn
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill

CHAMOIS

American Sponge & Chamois Co 49 Walker St N Y 7 N Y
Atlantic Sponge & Chamois Corp 49 Walker NY 13 NY
Albert Block & Sons Inc 36 Walker St New York 13 N Y
H L Ettman Sponge Co 1908 Olive St St Louis 3 Mo
Florida Sponge & Chamois Co 42 Cliff NY 7 NY
Gulf & West Indies Co 141 Water NY 5 NY
A C Lawrence Leather Co Peabody Mass
Dan Malloy Co Philadelphia 6 Pa
Nassau Sponge Co 124 W Kinzie St Chgo 10 Ill
Robinson Sponge Co 1805 Atlantic Ave Brooklyn 33 N Y
Schroeder & Tremayne Inc 1711 Delmar Blvd St Louis 3 Mo

CHIMNEY TOPS

Acme Brick Co Ft Worth 2 Tex
Cannelton Sewer Pipe Co Inc Cannelton Ind
Dickey W S Clay Mfg Co 922 Walnut St Kansas City 6 Mo
Fawsco Mfg Div Falls Stamping & Welding Co 1701 Front St Cuyshoga Falls O
Gichner Inc 1900 Kendall St NE Wash 2 D C
Houston Blow Pipe & Sheet Metal Works Box 1692 Houston 1 Tex
Lehigh Sewer Pipe & Tile Co Ft Dodge Ia
Northwestern Terra Cotta Co 1750 W Wrightwood Chgo Ill
Owensboro Sewer Pipe Co Inc Owensboro Ky
Pacific Clay Prods 306 W Av 26 Los Angeles 31 Cal
Robinson & Son Sewer Pipe Co Uhrichsville O
Robinson Clay Products Co Akron Ohio
Stillwater Clay Products Co 3334 Prospect Av Cleveland 15 Ohio
What Cheer Clay Products Co What Cheer Ia

CHISELS

Amer Swiss File & Tool Co Elizabeth N J
Black Panther Tool Co 401 N Broad St Philadelphia Pa
Bridgeport Hdwe Mfg Corp Bridgeport Conn
Cincinnati Tool Co Norwood Cincinnati 12 O
Cleveland Steel Tool Co Cleveland O
Delaware Tool Steel Corp Wilmington 99 Del
Gensco Tool Div General Steel Warehouse Co Inc 1812 N Kostner Ave Chicago 39 Ill
Goldblatt Tool Co 1924 Walnut St Kansas City 8 Mo
Greenlee Tool Co Div of Greenlee Bros & Co 2136 12th St Rockford Ill
Heller Bros Co 865 Mt Prospect Av Newark 4 N J
Leetonia Tool Co Leetonia Ohio
Mephisto Tool Co Inc Hudson N Y
Owatonna Tool Co Owatonna Minn
P & C Hand Forged Tool Co Portland 22 Ore
Peck Stow & Wilcox Co Southington Conn
Proto Tools 2209 Santa Fe Av Los Angeles 54 Calif
Rainey-Tool Grove City Pa
Sandvik Saw & Tool Div of Sandvik Steel Inc 47 Warren St N Y N Y
The Stanley Wks New Britain Conn
Vichek Tool Co 3001 E 87th St Cleveland 4 Ohio
Vulcan Tool Mfg Co Quincy 69 Mass

CLAMPS—"C"

Adjustable Clamp Co 417 N Ashland Av Chicago 22 Ill
Armstrong Bros Tool Co 5300 W Armstrong Av Chgo
Batavia Clamp Co Inc Batavia N Y
Black Bros Co Inc Mendota Ill
Cincinnati Tool Co Norwood Cincinnati 12 Ohio
Grand Specialties Co 3101 W Grand Av Chgo 22 Ill
Littlestown Hdwe & Foundry Co Littlestown Pa
Malleable Iron Fittings Co Branford Conn
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn

CLAMPS—carpenter steel bar

Adjustable Clamp Co 417 N Ashland Av Dept L Chicago 22 Ill
Batavia Clamp Co Inc Batavia N Y
Black Bros Co Inc Mendota Ill
Cincinnati Tool Co Norwood Cincinnati 12 O
Eberhard Mfg Co Div Eastern Malleable Iron Co Cleveland O

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Handy Mfg Co 2440 W Lawrence Chicago 25 Ill
Hartford Clamp Co E Hartford Conn
Phoenix Hdwe Mfg Co Buffalo N Y
James L Taylor Mfg Co 108 Parker Av Poughkeepsie N Y

CLAMPS—concrete form

Adjustable Clamp Co 417 N Ashland Av Dept L Chicago 22 Ill
Batavia Clamp Co Inc Batavia N Y
Cincinnati Tool Co Norwood Cincinnati 12 Ohio
M & M Wire Clamp Co 983-17th Av S E Minneapolis 14 Minn
Newark Ladder & Bracket Co Inc 3 Walnut Av Clark (Rahway) N J
Richmond Screw Anchor Co Inc 816 Liberty Av Brooklyn 8 N Y
Star Extension Products Co Inc 147 Cedar St N Y 6 N Y
Universal Form Clamp Co 1238 N Kostner Chgo 51 Ill
Williams Form Engineering Corp Grand Rapids 7 Mich

CLAMPS—filing

Adjustable Clamp Co 417 N Ashland Av Dept L Chicago 22 Ill
Hanchett Mfg Co Big Rapids Mich
Power Tool Div Rockwell Mfg Co 600 E Vienna Av Milwaukee 1 Wis
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn

CLAMPS—hand screw

Adjustable Clamp Co 417 N Ashland Av Dept L Chicago 22 Ill
Black Bros Co Inc Mendota Ill
Cincinnati Tool Co Norwood Cincinnati 12 Ohio
Eberhard Mfg Co Div Eastern Malleable Iron Co Cleveland O
Hartford Clamp Co E Hartford Conn
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
James L Taylor Mfg Co 108 Parker Av Poughkeepsie N Y
Union Tool Co Orange Mass

CLAY PRODUCTS

Adel Clay Products Co Des Moines Ia
Bowerston Shale Co Bowerston Ohio
Brazil Hollow Brick & Tile Co Brazil Ind
Cannelton Sewer Pipe Co Inc Cannelton Ind
W S Dickey Clay Mfg Co 922 Walnut St Kansas City 6 Mo
Gladding McBean & Co 1275 Harrison St San Francisco 3 Calif
Lehigh Sewer Pipe & Tile Co Fort Dodge Iowa
National Tile & Mfg Co Anderson Ind
Owensboro Sewer Pite Co Inc Owensboro Ky
The Robinson Clay Products Co Akron 8 Ohio
What Cheer Clay Products Co What Cheer Iowa

CLAY—fire

Cannelton Sewer Pipe Co Inc Cannelton Ind
Dee Clay Products Co Bloomingdale Ind
Denver Fire Clay Co Box 5510 Denver Colo
General Refractories Co Phil Pa
Gladding-McBean & Co San Francisco Cal
A P Green Fire Brick Co Mexico Mo
Harbison Walker Refractories Co Farmers Bank Bldg Pittsburgh Pa
Laclede-Christy Co 1711 Ambassador Bldg St Louis 1 Mo
Lehigh Sewer Pipe & Tile Co Ft Dodge Ia
Mexico Refractories Co Mexico Mo
Owensboro Sewer Pipe Co Inc Owensboro Ky
Pacific Clay Prods Co 806 W Av 26 Los Angeles 31 Cal
Plibrico Jointless Firebrick Co 1800 N Kingsbury Chgo 14 Ill
The Robinson Clay Products Co Akron 8 Ohio
Seaboard Refractories Co Perth Amboy N J
Stillwater Clay Prods Co 3334 Prospect Av Cleveland 15 Ohio

CLEANER—floor

Absorbine Mfg Co 1609-17 N 14th St St Louis 6 Mo
Armstrong Cork Co 4704 Ocean Av Lancaster Pa
Bengal Co 214 St Nicholas Av New York 27 N Y
Boston Varnish Co Boston 49 Mass
E L Bruce Co Box 397 Memphis Tenn
Camp Chemical Co Inc 2nd Av & 13th St Brooklyn 19 N Y
Cellowax Co 2114 N Charles St Baltimore Md
Franklin Research Co 5134 Lancaster Av Philadelphia 31 Pa
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
Hydrochime Co 3540 Norton Rd Cleveland 11 Ohio
Industrial Chemical Laboratories Ltd Omaha 2 Neb
International Chemical Co 3140 S Canal St Chicago 16 Ill
Oakite Products Inc 22 Thames New York 6 N Y
Penetone Co Tenafly N J
RCA Rubber Co 1833 E Market St Akron 5 Ohio
The Savogran Co 25 Huntington Av Boston 16 Mass
Schalk Chemical Co 351 E 2nd St Los Angeles 12 Calif
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill
U S Sanitary Specialties Corp 1001 S Calif Ave Chgo 12 Ill
Wilbur & Williams Co 130 Loncoln St Boston 35 Mass
Williams Prods Co Inc 6127-37 Cedar Av Phila 43 Pa

CLEANER—paint brush

Absorbine Mfg Co 1609-17 N 14th St St Louis 6 Mo
Bengel Co 214 St Nicholas Av New York 27 N Y
Boyer Chemical Lab Co 2232 S Wabash Av Chicago 16 Ill
Samuel Cabot Inc 420 Oliver Bldg Boston 9 Mass
Cleveland Cleaner & Paste Co Cleveland 2 Ohio
G N Coughlan Co West Orange NJ
H B Fuller Co 255 Engle St St Paul 2 Minn
Industrial Chemical Development Corp 347 Madison Av NY 17 NY
J A Meinhardt & Co 2622 S Shields Av Chgo Ill
Oakite Prods Inc 22 Thames St New York 6 NY
Patent Cereals Co Geneva NY
Penetone Co Tenafly N J
Red Devil Tools Irvington 11 N J (electric)
The Savogran Co 25 Huntington Av Boston 16 Mass
Schalk Chemical Co 351 E 2nd St Los Angeles 12 Cal
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill
Toch Bros Inc 2600 Richmond Terr Station Island 3 NY
Vita-Var Corp 1180 Raymond Av Newark NJ
Wilbur & Williams Co 130 Loncoln St Boston 35 Mass
Wooster Brush Co Wooster O

CLEANER—wall paper

Absorene Mfg Co St Louis Mo
The Blotex Co 124 S Broadmoor Blvd Springfield Ohio
Cleveland Cleaner & Paste Co Cleveland 2 O
Climax Industries Inc 2080 W 110 St Cleveland 2 O
J A Meinhardt & Co 2622 S Shields Av Chgo Ill
Schalk Chemical Co 351 E Second St Los Angeles 12 Calif
Sponge Rubber Prods Co Derby Conn
Tamms Industries Inc 228 N La Salle St Chgo Ill

CLEANER—window

Boyer Chemical Laboratory Co 2232 S Wabash Chicago 16 Ill
Boyle-Midway Inc 22 E 40th St New York 16 N Y
Chemical Supply Co Plymouth Bldg Cleveland 15 Ohio
Crescent Prods Co 315 N 14th St Terre Haute Ind
Franklin Research Co 5134 Lancaster Av Phila 31 Pa
Gold Seal Co Bismarck N D
J I Holcomb Mfg Co Indianapolis 7 Ind
R M Hollingshead Corp Camden N J
Oakite Products Inc 22 Thames New York 6 N Y
U S Sanitary Specialties Corp 1001 S Calif Av Chgo 12 Ill

CLIPS—concrete

Goldsmith Metal Lath Co 4501 Chickering Av Cincinnati 32 Ohio
Merwin Mfg Co 19th & German Sts Erie Pa
Sommer Metalcraft Corp 450 Peston Dr Crawfordsville Ind
Union Steel Prod Co Albion Mich
Winner Industries 1023 Washington Av So Minneapolis 15 Minn

CLIPS—floor

Bethlehem Steel Co Bethlehem Pa
Merwin Mfg Co Erie Pa
Loxit Moulding Co 1217 W Washington Blvd Chgo 7 Ill

CLIPS—glazing for steel sash

Adams Co Dubuque Ia
Copco Steel & Engineering So 14035 Grand River Av Detroit 27 Mich
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Gabriel Steel Co 13700 Sherwood St Detroit 12 Mich
Harris Inc 200 E Long St Columbus 15 Ohio
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Sommer Metalcraft Corp Crawfordsville Ind

CLOTH—hardware

Clinton Wire Cloth Co Clinton Iowa
Cyclone Fence Div American Steel & Wire Co U S Steel Corp Sub P O Box 260 Waukegan 1 Ill
Gilbert & Bennett Mfg Co Blue Island Ill
Kentucky Metal Products Co Preston St & Aubudon Park Louisville 4 Ky
Northwestern Steel & Wire Co Sterling Ill
John A Roebling's Sons Co 640 S Broad St Trenton 2 N J
Seneca Wire & Mfg Co Fostoria O
F P Smith Wire & Iron Works 2340 Clybourn Av Chicago 14 Ill
Wickwire Spencer Steel A Div of Colorado Fuel & Iron Corp 500 Fifth Av New York 18 N Y

CLOTHES DRYERS

Chicago Dryer Co 2210 N Pulaski Road Chicago 39 Ill
Clay Equipment Corp Cedar Falls Ia
Fawsco Mfg Div of Falls Stamping & Welding Co 1701 Front St Cuyahoga Falls Ohio
Gem Mfg Co North Girard Penna
Rotary Clothes Dryer Co Inc 840 Lawrence St Allentown Pa
Sawhill Mfg Co Sharon Pa
Sommer Metalcraft Corp Crawfordsville Ind
Tenrco Inc 4104 Park Av Nashville Tenn
The Southern Galvanizing Co Bush St & B & O RR Baltimore 30 Md (steel fabricated)
Woodenware Products Corp 122 N 7th St St Louis 1 Mo

CLOTHES—industrial work

Elin Manufacturing Co Rochester Ind

CLOTHESLINE—braided fabric

American Phenolic Corp 1830 S 54th Av Cicero 50 Ill (plastic coated)
John H Graham & Co Inc 105 Duane New York 8 N Y
Highland Cordage Co Hickory N C
Hoffman Lion Mills Co Inc 38 Hillside St Fall River Mass
Plymouth Cordage Co No Plymouth Mass
Puritan Cordage Mills Inc 1205 E Washington St Louisville 6 Ky
Samson Cordage Works 89 Broad Boston Mass
Silver Lake Co Chattahoochee Ga (not fabric)
South Easter Cordage NBC Bldg Cleveland 14 Ohio
Southern Mills Corp Oxford Ala

CLOTHESLINE—wire

American Steel & Wire Co 614 Superior Av Cleveland 13 Ohio
Bethlehem Steel Co Bethlehem Pa
Colorado Fuel & Iron Corp Wickwire Spencer Steel Div 500 Fifth Av New York 18 N Y
Copperweld Steel Co Glassport Pa
Cupples Co 401 S 7th St St Louis 2 Mo
Nichols Wire & Aluminum Co Davenport Iowa (aluminum)
Northern Steel & Wire Co Sterling Ill
Pittsburgh Steel Co Pittsburgh 30 Pa
Tennessee Coal Iron & RR Co U S Steel Corp Sub Birmingham Ala

CLOTHESLINE TIGHTENERS

Sharon Hdwe Mfg Co Sharon Pa
South Eastern Cordage NBC Bldg Cleveland 14 Ohio
The Stanley Works 195 Lake St New Britain Conn
Sterling Foundry Co Inc Sterling Ill

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

COAL

Black Star Coal Corp Louisville Ky
Blue Diamond Coal Co Knoxville Tenn
Central Coal & Coke Co Kansas City Mo
Cleveland-Cliffs Iron Co Cleveland 14 Ohio
Clinchfield Coal Corp Dante Va
Colorado Fuel & Iron Corp Denver 1 Colo
Consolidated Coal & Coke Co Denver Colo
Defiance Coal Co Albuquerque N Mex
Intermountain Coal & Lumber Co Elkins W Va
Montana Coal & Iron Co Washoe Mont
Pardee & Curtin Lumber Co Clarksburg W Va
Red Jacket Coal Corp 115 E Rich St Columbus 15 Ohio
Stearns Coal & Lumber Co Stearns Ky

COAL CHUTES

Allen Steel Products Inc 12911 Hillview Av Detroit 27 Mich
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Gabriel Steel Co Cat A 13700 Sherwood Detroit 12 Mich
Harris Inc 200 E Long St Columbus 15 Ohio
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Lippmann Engineering Wks 4603 W Mitchell St Milwaukee 14 Wis
Majestic Co 303-C Erie St Huntington Ind
Muller Machinery Co Inc Metuchen N J
Richmond Engineering Co Inc 7th & Hospital Sts Richmond 5 Va

COLLECTION SERVICE

Lumbermen's Credit Assn Inc Dept AA 608 S Dearborn St Chgo 15 Ill

COLORS—masonry, concrete, mortar, plaster, cement

Blue Ridge Talc Co Inc Henry Va
Ceresit Waterproofing Corp 3227 So Shields Chgo Ill
Clinton Metallic Paint Co Clinton N Y
Ewing M Fox Co 240 E 136th St N Y N Y
Geo C Gordon Chemical Co Kansas City Mo
A C Horn Co Inc 10th & 44th Av Long Island City 1 N Y
Mineral Pigments Corp Muirkirk Md
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Ricketsen Mineral Color Wks Milwaukee Wis
J Lee Smith & Co Inc 25 Ann St New York 38 NY
Smith Chem & Color Co Inc 55 John Brooklyn 1 NY
L Sonneborn Sons Inc 80 Eight Av New York 11 N Y
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill
Toch Bros Inc 2600 Richmond Terr Staten Island 3 N Y
Wesco Waterpaints Inc 5th & Grayson Sts Berkeley 10 Calif

COLORS—paint

Adelphi Paint & Color Wks Inc 3600 Dumont Av Ozone Park 17 N Y
American Varnish Co 1138 N North Branch Chicago 22 Ill
Boston Varnish Co Everett Sta Boston 49 Mass
Bruning Bros Inc 4209 E Chase St Baltimore 5 Md
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Devoe & Raynolds Co Inc 787 First Av NY 17 NY
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Empire Varnish Co 2636 76th St Cleveland 4 Ohio
Glidden Co Cleveland 2 Ohio
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
Lowe Bros Co 424 E 3rd St Dayton 2 O
Murphy Paint Div Interchemical Corp 231 Grant Av East Newark N J
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 22 Pa
Pratt & Lambert Inc 75 Tonawanda St Buffalo 7 N Y
Sherwin-Williams Co 101 Prospect Av NW Cleveland Ohio
Smith Chemical & Color Co Inc 55 John Brooklyn 1 NY
Tamms Industries Inc 228 N LaSalle St Chicago Ill

COLUMNS—built-up wood

Carr Adams & Collier Co Dubuque Ia
Cole Mfg Co PO Box 3657 Memphis 2 Tenn
Curtis Cos Inc Clinton Ia
Huttig Sash & Door Co 1206 S Vandeventer Av St Louis 10 Mo
Mutual Fir Column Co Tacoma Wash
Pacific Mutual Door Co Tacoma Wash
Washington Mfg Co P O Box 1544 Tacoma 1 Wash

CONCRETE BLOCK MACHINES

Besser Mfg Co Alpena Mich
Colorcrete Industries Inc Holland Mich
Concrete Transport Mixer Co 4985 Fyler Av St Louis 9 Mo
Dunn W E Mfg Co Holland Mich
Essick Mfg Co 1950 Santa Fe Av Los Angeles 21 Calif
Fleming Mfg Inc 4985 Fyler Av St Louis 9 Mo
Kent Mach 115 Portage Trail Cuyahoga Falls O
Lith-I-Bar Holland Mich
Multiplex Machy Corp Elmore O
R S Reed Corp Three Rivers Mich
Stearns Mfg Co Adrian Mich

CONCRETE CURING COMPOUNDS

Adensite Co Inc 37-19 23rd Long Island City N Y
American Fluresit Co Inc 4011 Red Bank Rd Cincinnati 27 Ohio
Ceresit Waterproofing Corp 3227 So Shields Chicago Ill
The Dow Chemical Co Midland Mich
Fort Pitt Chem Co 26th & Smallman St Pittsburgh 22 Pa
Glidden Co Cleveland 2 Ohio
A C Horn Co Inc 10th St & 44th Av Long Island City N Y
Keystone Asphalt Prods Co 101 E Ontario St Chicago 11 Ill
Ranetite Mfg Co Inc 1917 S Broadway St Louis Mo
Sealcon Prod Inc 927 Second Av S Minneapolis 2 Minn
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Toch Bros Inc 2600 Richmond Terr Staten Island 3 N Y
Truscon Laboratories Inc Box 69 Milwaukee Junction PO Detroit 11 Mich

CONCRETE CURING PAPER

Angier Corp Framingham Mass
Keystone Asphalt Products Co 101 E Ontario St Chicago 11 Ill
Presstite Engineering Co 3900 Chouteau Av St Louis 10 Mo
Richkraft Co 228 N La Salle Chicago 1 Ill
Sisalkraft Co Dept AL-4 205 W Wacker Drive Chicago 6 Ill
Thilmany Pulp & Paper Co Kaukauna Wis

CONCRETE FORMS

Aetna Plywood & Veneer Co 1732 N Elston Av Chicago 22 Ill
American Steel Works 1211 W 27th St Kansas City 8 Mo
Heltzel Steel Form & Iron Co Warren Ohio
Multiplex Machy Corp Elmore O
Newark Ladder & Bracket Co Inc 3 Walnut Av Clark (Rahway) N J
Universal Form Clamp Co 1238 N Kostner Av Chicago 51 Ill
Williams Form Engineering Corp 1501 Madison Av SE Grand Rapids Mich

CONCRETE HARDENER

Adensite Co Inc 37-19 23rd St Long Island City N Y
American Fluresit Co Inc 4011 Red Bank Rd Cincinnati 27 Ohio
Belmont Smelting & Refining Works Inc 330 Belmont Av Brooklyn 7 N Y
Blue Ridge Talc Co Inc Henry Va
Camp Chemical Co Inc 2nd Av & 13th St Brooklyn 19 N Y
Ceresit Waterproofing Corp 3227 So Shields Chgo Ill
Empire Varnish Co 2636 E 76th St Cleveland 4 Ohio
Evercrete Corp 424 W 42nd St NY NY
Fort Pitt Chem Co 26th & Smallman St Pittsburgh 22 Pa
Harrop Chemical Co 135 Hoboken Av Jersey City 2 N J
Haynes Prods Co 4007 Farnam St Omaha 3 Nebr
A C Horn Co Inc 10th St & 44th Av Long Island City N Y
Smooth-On Mfg Co 572 Communipaw Av Jersey City 4 N J
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Standard Dry Wall Products Inc PO Box X New Eagle Pa
Steelcote Mfg Co 3418 Gratiot St Louis 3 Mo
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill
Toch Bros Inc 2600 Richmond Terr Staten Island 3 N Y
Truscon Labs Detroit Mich
Wilbur & Williams Co 130 Lincoln St Boston 35 Mass

CONVEYORS—chain link & chain belt

Chain Belt Co 1658 W Bruce St Milwaukee 4 Wis
Cyclone Fence Div American Steel & Wire Co Sub U S Steel Corp PO Box 260 Waukegan 1 Ill
Geo Haiss Mfg Co Inc 381 Canal Pl Bronx 51 NY NY
Godfrey Conveyor Co Inc Elkhart Ind
Jeffrey Mfg Co 827 N 4th St Columbus 16 O
Lamson Corp Syracuse 1 N Y
Link Belt Co 300 W Pershing Chgo Ill
Lippman Engineering Wks 4603 W Mitchell Milwaukee 14 Wis
Mathews Conveyer Co Ellwood City Pa
Northern Conveyor Co Janesville Wis
Stephens-Adamson Mfg Co Box 272 Aurora Ill

CONVEYORS—gravity roller

A B Farquhar Co 141 N Duke St York Pa
Lamson Corp Syracuse 1 N Y
Lippmann Engineering Wks 4603 W Mitchell St Milwaukee 14 Wis
Logan Co Inc Louisville Ky
Rapids-Standard Co Inc 235 Rapistan Bldg Grand Rapids 2 Mich
Speedways Conveyors Inc 1308 Niagara St Buffalo 13 N Y
Standard Conveyor Co Dept AL-42 North St Paul 9 Minn
Western Foundry Co Portland 1 Ore

CONVEYORS—gravity wheel

Lamson Corp Syracuse 1 N Y
Lippmann Engineering Wks 4603 W Mitchell St Milwaukee 14 Wis
Logan Co Inc Louisville 6 Ky
Mathews Conveyor Co Ellwood City Pa
Rapids-Standard Co Inc 235 Rapistan Bldg Grand Rapids 2 Mich
Speedways Conveyors Inc 1308 Niagara St Buffalo 13 N Y
Standard Conveyor Co Dept AL-42 North St Paul 9 Minn
Western Foundry Co Portland 1 Ore

CONVEYORS—overhead

Cleveland Tramrail Div Cleveland Crane & Engineering Co 5866 E 289th St Wickliffe Ohio
Godfrey Conveyor Co Elkhart Ind
Industrial Equipment Co 315 N Ada St Chicago 7 Ill
Lamson Corp Syracuse 1 N Y
Link-Belt Co 300 W Pershing Rd Chgo 9 Ill
Lippmann Engineering Wks 4603 W Mitchell St Milwaukee 14 Wis
Mathews Conveyor Co Ellwood City Pa
The Ney Mfg Co 948 High Av S W Canton 4 Ohio
Richards-Wilcox Mfg Co Aurora Ill
Starline Inc Harvard Ill
Western Foundry Co Portland 1 Ore

CONVEYORS—portable belt

Atlas Conveyor Co Clintonville Wis
Barber-Greene Co Aurora Ill
Fairfield Eng Co Marion O
A B Farquhar Co 142 N Duke St York Pa
Godfrey Conveyor Co Elkhart Ind
Geo Haiss Mfg Co Inc 381 Canal Pl Bronx 51 New York N Y
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Lamson Corp Syracuse 1 N Y
Lippmann Engineering Wks 4603 W Mitchell St Milwaukee 14 Wis
Northern Conveyor Co Janesville Wis
Rapids-Standard Co Inc 235 Rapistan Bldg Grand Rapids 2 Mich
Speedways Conveyors Inc 1308 Niagara St Buffalo 13 N Y
Standard Conveyor Co Dept AL-42 North St Paul 9 Minn
Western Foundry Co Portland 1 Ore

CONVEYORS—portable bucket

Barber-Greene Co Aurora Ill
Fairfield Eng Co Marion O
Godfrey Conveyor Co Inc Elkhart Ind
George Haiss Mfg Co Inc 381 Canal Place Bronx 51 N Y N Y
Lippmann Engineering Wks 4603 W Mitchell St Milwaukee 14 Wis
Northern Conveyor Co PO Box 46 Janesville Wis
Western Foundry Co Portland 1 Ore

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CONVEYORS—portable flight

Atlas Conveyor Co Clintonville Wis
Barber-Greene Co Aurora Ill
Fairfield Eng Co Marion O
A B Farquhar Co York Pa
Godfrey Conveyor Co Elkhart Ind
George Haiss Mfg Co Inc 381 Canal Place Bronx N Y C 51 N Y
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Lamson Corp Syracuse 1 N Y
Lippman Engineering Works 4603 W Mitchell St Milwaukee 14 Wis
Northern Conveyor Co Janesville Wis
Standard Conveyor Co Dept AL-42 North St Paul 9 Minn

CONVEYORS—slab

Allington & Curtis Mfg Co Saginaw Mich
The C O Bartlett & Snow Co 6200 Harvard Av Cleveland 5 Ohio
Chain Belt Co Milwaukee 4 Wis
Corley Mfg Co Chattanooga 1 Tenn
The Filer & Stowell Co 147 E Becher St Milwaukee 7 Wis
Godfrey Conveyor Co Inc Elkhart Ind
Lippman Engineering Works 4603 W 14th St Milwaukee 14 Wis
Rapids-Standard Co 83 Rapistan Bldg Grand Rapids 2 Mich
Stephens-Adamson Mfg Co Aurora Ill
The Wheland Co Chattanooga 2 Tenn

CORD—sash

Cupples Co 401 S 7th St St Louis 2 Mo
John H Graham & Co Inc 105 Duane NY 8 NY
Highland Cordage Co Hickory N C
Hoffman Lion Mills Co Inc Fall River Mass
Hooper Wm E & Sons Co Phil Pa
Puritan Cordage Mills 1205 E Washington Louisville 6 Ky
Samson Cordage Works 89 Broad Boston 10 Mass
Silver Lake Co Chattahoochee Ga
Southern Mills Corp Oxford Ala
Whittier Mills Co Chattahoochee Ga

CORD—sash, wire

Bethlehem Steel Co Bethlehem Penna
Broderick & Bascom Rope Co 4203 Union Blvd St Louis 15 Mo
Colorado Fuel & Iron Corp Wickwire Spencer Steel Div 500 Fifth Av New York 18 N Y
John A Roebling's Sons Co Trenton N J
Upson-Walton Co Cleveland O

CORD—venetian blind

Archer A W Co Inc 366 Broadway NY 13 NY
Cleveland Mill & Power Co Lawndale N C
J E Fricke Co 40 N Front St Philadelphia 6 Pa
John H Graham & Co Inc 105 Duane St New York 8 N Y
Hoffman Lion Mills Co Inc Falls River Mass
Raucher Mfg Co Inc Norwich Conn
Samson Cordage Works 89 Broad St Boston 10 Mass

CORN CRIBS

H D Campbell & Co Rochelle Ill
Capitol Fence Co 735 N Water Milwaukee 2 Wis
E S Gaynor Lumber Co Sioux City Iowa
Illinois Wire & Mfg Co PO Box A1396 Joliet Illinois
Keystone Steel & Wire Co Peoria 7 Ill
Mattsen Wire & Mfg Co Inc Joliet Ill
Midwest Steel Products Co Kansas City Mo (steel)
Nebraska Bridge Supply & Lumber Co Omaha 5 Neb
Rowe Mfg Co Dept AL Galesburg Ill
Wheeler-Arnold Co Wittenberg Wis

CORNER BEAD

Alabama Metal Lath Co Inc PO Box 992 Birmingham Ala
The Bostwick Steel Lath Co 100 Heaton Av Niles Ohio
Ceco Steel Products Corp 5601 W 26th St Chgo 50 Ill
Goldsmith Metal Lath Co Cincinnat. 32 O
Inland Steel Products Co (formerly Milcor Steel Co) 4027 W Burnham St Milwaukee 1 Wis
Macklanburg - Duncan Co Oklahoma City 1 Okla
National Gypsum Co Buffalo 2 N Y
Penn Metal Co Inc 205 E 42nd St N Y 17 N Y
Richkraft Co 228 N LaSalle St Chicago 1 Ill
Truscon Steel Co Youngstown 1 O
U S Gypsum Co 300 W Adams Chgo 6 Ill
Wheeling Corrugating Co Wheeling West Virginia

CORNERS—building

Bugher Mfg Co Kokomo Ind
Ceco Steel Prods Corp 5601 W 26th St Chicago 50 Ill
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
F D Kees Mfg Co Beatrice Nebr
Hosking Paper & Supply P O Drawer 43 Wilmette Ill
Chas O Larson Co Sterling Ill
Penn Metal Co Inc 205 E 42nd St NY 17 NY
St Paul Corrugating Co 3 W Water St St Paul 1 Minn

COUNTER TOPS

Aetna Plywood & Veneer Co 1732 N Elston Av Chicago 22 Ill
Bel-Wood Mfg Co Ackerman Miss
Bradley Lumber Co of Arkansas Warren Ark
Curtis Companies Inc Clinton Iowa
Ingram-Richardson Mfg Co Beaver Falls Pa
Marsh Wall Products Inc Sub of Masonite Corp Dept 441 Dover Ohio
The Mengel Co Inc Louisville 1 Ky
National Tile & Mfg Co Anderson Ind
U S Mengel Plywoods Inc Box 1612 Louisville 1 Ky
United States Plywood Corp Dept 615 55 W 44th New York 18 N Y
U S Rubber Co 1230 Avenue of the Americas New York 20 N Y
Westinghouse Electric Corp 306 Fourth Av Pittsburgh 30 Pa
Williams Products Co Inc 6127 Cedar Av Philadelphia 43 Pa

COUNTERS—store & display

Engineering Plywood Products Co PO Box 1326 Tacoma Wash
Equipto Div of Aurora Equipment Co Aurora Ill
General Wood Works Council Bluffs Ia
Grand Rapids Store Equipment Co Grand Rapids Mich
W C Heller & Co Cat #40A 1050 Bryant St Montpelier Ohio
Lyon Metal Products Inc Aurora Ill
Rigidized Metals Corp 658 Ohio St Buffalo 3 N Y
Sommer Metalcraft Corp Crawfordsville Ind
Universal Steel Equipment Corp 135 W 23rd NY NY

COUPLINGS—flexible shaft

Brad Foote Gear Wks Inc Cicero Ill
Chain Belt Co 1600 W Bruce St Milwaukee 4 Wis
Diamond Chain Co Inc 402 Kentucky Av Dept 450 Indianapolis 7 Ind
Falk Corp Milwaukee Wis
Jeffrey Mfg Co 827 N 4th St Columbus 16 Ohio
Link Belt Co 300 W Pershing Chgo Ill
Lovejoy Flexible Coupling Co 5001 W Lake Chgo 44 Ill
Mall Tool Co 7733 S Chicago Av Chicago 19 Ill
Morse Chain Co 7601 Central Av Detroit 8 Mich

CRANES—overhead traveling

Bridgeport Chain & Mfg Co Bridgeport 1 Conn
Chisholm Moore Hoist Corp Tonawanda N Y
Cleveland Tramrail Div Cleveland Crane & Engineering Co 5866 E 289th St Wickliffe Ohio
Industrial Equipment Co 315 N Ada St Chicago 7 Ill
Reading Chain & Block Corp 2100 Adams St Reading Pa
Richards-Wilcox Mfg Co Aurora Ill
Shaw-Box Crane & Hoist Div Manning, Maxwell & Moore Inc Muskegon Mich
Shepard Niles Crane & Hoist Co Montour Falls N Y
Wright Hoist Div American Chain & Cable Co Inc New York N Y

CRANES—power industrial

American Hoist & Derrick Co 63 S Robert St St Paul 1 Minn
Atlantic Transportation Co Div of Yale & Towne Mfg Co 101 W 87th Chicago 20 Ill
Elwell-Parker Electric Co 4205 St Clair Av Cleveland 3 Ohio
Hyster Co 2979 N E Clackamas Portland 8 Ore Peoria 1 Ill
Koehring Co 3026 W Concordia Av Milwaukee 10 Wis
R G Le Tourneau Inc 2301 N Adams St Peoria Ill
Shepard Niles Crane & Hoist Corp Montour Falls N Y
Silent Hoist & Crane Co 860 63rd Brooklyn 20 N Y

CRANES—tractor & truck

Bradney Machine Co Inc Middletown N Y (truck only)
Bucyrus-Erie Co South Milwaukee Wis
Clyde Iron Works Inc Duluth 1 Minn
Hyster Co 2979 N E Clackamas Portland 8 Ore — Peoria 1 Ill
Koehring Co 3026 W Concordia Av Milwaukee 10 Wis
R G Le Tourneau Inc 2301 N Adams St Peoria Ill
Silent Hoist & Crane Co 860 63rd Brooklyn 20 N Y

CRAYONS—lumber marking

American Crayon Co Sandusky O
Eagle Pencil Co 703 E 13th New York 9 N Y
Jos Dixon Crucible Co Jersey City N J
A W Faber-Castell Pencil Co Inc 41 Dickerson St Newark 4 N J
Goldblatt Tool Co 1924 Walnut St Kansas City 6 Mo
Markal Co 3052 W Carroll Av Chicago 12 Ill
Markwell Mfg Co Inc 200 Hudson St New York 13 N Y
National Crayon Co Easton Pa
Standard Crayon Mfg Co Danvers Mass

CREDIT INFORMATION

Lumbermen's Credit Assn Inc Dept AA 608 S Dearborn Chicago Ill

CUTTER HEADS

Delta Power Tool Div Rockwell Mfg Co 693-D E Vienna Av Milwaukee Wis
Ekstrom Carlson & Co 1417 Railroad Av Rockford Ill
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Samuel J Shimer & Sons Inc 10 Race St Milton Pa
Wilson Saw Div Media Machine Works Inc Media Pa

CUTTERS—asbestos shingle

Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
The Ruberoid Co 500 Fifth Av New York 18 N Y
Specialty Tool Manufacturers Belleville Ill
Tri-States Building Materials Co Inc PO Box 1476 Ft Worth Tex

CUTTERS—insulation board

American Mfg Co 2119 Pacific Av Tacoma Av Tacoma 2 Wash
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Kimball Mfg Co Inc 1633 Sycamore Royal Oak Mich
Stanley Tools Div of The Stanley Works 111 Elm St New Britain Conn

CUTTERS—lock corner

E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
S A Woods Machine Co Boston 27 Mass

CUTTERS—moulding

Boice Crane Co 930 W Central Av Toledo 6 Ohio
Delta Power Tool Div Rockwell Mfg Co 693-D E Vienna Av Milwaukee Wis
De Walt Inc 51 Fountain Av Lancaster Pa
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Samuel J Shimer & Sons Inc 10 Race St Milton Pa
Stanley Electric Tools New Britain Conn
Taylor-Stiles & Co Riegelsville N J
S A Woods Machine Co Boston 27 Mass

CUTTERS—picket

H A Schubert Co 1210 Washington Av Wilmette Ill

CUTTERS—tile

Alloy Tile Corp 109 Roosevelt Av Belleville N J
De Walt Inc 51 Fountain Av Lancaster Pa

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Fletcher Terry Co 592 South St Forestville Conn
Goldblatt Tool Co 1924 Walnut St Kansas City 6 Mo
J M J Products Co Belleville Ill
Red Devil Tools Irvington 11 N J
Walter E Selck & Co 225 W Hubbard Chicago 10 Ill

DAMPERS—fireplace

Adams Co Dubuque Ia
Bennett-Ireland 449 Pine St Norwich N Y
Colonial Fireplace Co 540 N Cicero Av Chicago Ill
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Gabriel Steel Co Cat A 13700 Sherwood Detroit 12 Mich
Harris Inc 200 E Long St Columbus 15 Ohio
Hart Products Inc 915 E Kentucky St Louisville 4 Ky
Industrial Iron Works PO Box 4625 Portland 2 Ore
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Majestic Co 303-C Erie St Huntington Ind
Metal Crafters 1756 E Av NE Cedar Rapids Ia
Peerless Mfg Corp Louisville Ky
Price Fireplace Heater & Tank Corp 156 West Austin St Buffalo 7 N Y
Superior Fireplace Co 1708 East 15th St Dept AL 512 Los Angeles Cal and 521 North Point Road Dept 521 Baltimore 6 Md
Vestal Stove Co Box 152-A Sweetwater Tenn

DECALCOMANIA TRANSFERS

Chicago Decalcomania Co 3310 Elston Av Chicago 18 Ill
The Meyercord Co 5323 W Lake Chicago 44 Ill
Palm Bros Decalcomania Co 3716 Regent Av Cincinnati 12 Ohio

DIFFERENTIALS—automatic locking, truck axles

Detroit Automotive Products Corp 8701 Grinnell Av Detroit 13 Mich
Truckstell Mfg Co Union Commerce Bldg Cleveland 14 Ohio

DIPPING VATS—lumber

Johnson & Carlson 848 W Eastman Chgo 22 Ill
Richmond Engineering Co Inc Richmond Va

DISHWASHERS—electric

Apex Rotarex Corp Cleveland Ohio
Hotpoint Inc 5600 W Taylor St Chicago 44 Ill
General Electric Co 1 River Rd Schenectady 5 N Y
Jackson Dishwasher Co Cleveland Ohio
Mullins Mfg Corp 101 University Warren Ohio
Westinghouse Electric Corp 306 4th Av Pittsburgh 30 Pa

DISPLAYS

Multiplex Display Fixture Co 907-917 N 10th St St Louis Mo (swinging panel type)
Reflector Hardware Corp Dept AL-D 2245 S Western Av Chicago 8 Ill

DOLLIES

The Fairbanks Co 393 Lafayette St New York 3 N Y
Hamilton Caster & Mfg Co Hamilton O
Howe Scale Co Rutland Vermont
Lippman Engineering Wks 4603 W Mitchell St Milwaukee 14 Wis
Morse Metal Products Co Inc 295 E 2nd St New York 9 N Y
Nutting Truck & Caster Co Inc 1125 West Division St Fairbault Minn

DOOR BELLS & CHIMES

J C Deagan Inc 1770 W Berteau Av Chgo Ill
Edwards & Co Inc Norwalk Conn
Nutone Inc Dept AL-4 Red Bank & Madison Rd Cincinnati 27 O (chimes only)
The A E Rittenhouse Co Inc Honeoye Falls N Y (electric chimes)
Starr Bros Bell Co East Hampton Conn

DOOR BOTTOMS—automatic

Chamberlin Co of America 1254 LaBrosse St Detroit 32 Mich
Dorbin Metal Strip Mfg Co. 2408 S Cicero Ave Chicago 50 Ill
Macklanburg - Duncan Co Oklahoma City Okla
Sentry Stop-A-Draft Co 20 N Wacker Dr Chicago 6 Ill
Thermal Co Philadelphia 19 Pa

DOOR CHECKS

P & F Corbin Div American Hdwe Corp New Britain Conn
Frantz Mfg Co Sterling Ill
Grand Specialties Co 3101 W Grand Av Chicago 22 Ill
Hardware Products Inc 806-812 N 6th St Reading Pa
Harris Inc 200 E Long St Columbus 15 Ohio
Kant Slam Door Check Co Bloomfield Ind
Lockwood Hardware Mfg Co 35 Daniels St Fitchburg Mass
Newell Mfg Co Lowell Mich
Norwalk Lock Co 395 Broadway New York 13 N Y
Russell & Erwin Div The American Hdw Corp New Britain Conn
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Yale & Towne Mfg Co Stamford Conn

DOOR CLOSERS

Akron Hdwe Mfg Corp 32nd Av & 57th St Woodside N Y
Bommer Spring Hinge Co Inc 263 Classon Av Broolyn 5 N y
P & F Corbin Div American Hdwe Corp New Britain Conn
The Eagle Lock Co Terryville Conn
Hardware Prods Inc 806-812 N 6th St Reading Pa
Lockwood Hdwe Mfg Co Fitchburg Mass
Newell Mfg Co Lowell Mich
Norwalk Lock Co 395 Broadway New York 13 N Y
S Parker Hardware Mfg Co 27 Ludlow New York 2 N Y
Russell & Erwin Div The American Hdw Corp New Britain Conn
Sager Lock Wks North Chicago Ill
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Segal Lock & Hdwe Co Inc 395 Broadway NY 13 NY
Shelby Spring Hinge Co Shelby Ohio
Wagner Mfg Co Cedar Falls Ia
Yale & Towne Mfg Co Stamford Conn

DOOR DISPLAY STANDS

American Woodworking Co 1658 N Lowell Av Chgo 39 Ill
Ken-Ro-Bil Corp Van Buren Ohio
Multiplex Display Fixture Co 907-917 N 10th St St Louis Mo (pivoting type)

DOOR FRAMES—metal

Aetna Steel Products Corp 730 Fifth Av N Y 19 N Y (steel)
American Welding & Mfg Co 320 Dietz Rd Warren Ohio
Brasco Mfg Co Harvey Ill
Ceco Steel Products Corp 5601 W 26th Chicago 50 Ill
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Detroit Steel Prods Co Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
Diebold Inc Canton 2 Ohio
International Fireproof Door Co 76-78 Lexington Av Brooklyn 5 N Y
Metal Crafters Division Castone Products Co Cedar Rapids Iowa
One-der Frame 2109 3rd Ave N Birmingham 3 Ala
Richards-Wilcox Mfg Co Aurora Ill
Soule Steel Co PO Box 3510 Rincon Annex San Francisco 19 Cal
Southern Wire & Iron Works 441 Memorial Drive S E Atlanta Ga
J S Thorn Co 20th & Allegheny Av Philadelphia 32 Pa
Truscon Steel Co Youngstown Ohio
United Steel Fabricators Inc Wooster Ohio
Virginia Metal Products Corp 60 Hudson St New York 13 N Y
Wollaeger Steel Corp 61 Broadway N Y 6 N Y

DOOR FRAMES—wood

American Sash & Door Co Kansas City 1 Mo
Bel-wood Mfg Co Ackerman Miss
Biles-Coleman Lbr Co Inc Omak Wash
Bradley Lumber Co of Arkansas Warren Ark
Bradley Miller & Co 1200 Marquette Av Bay City Mich
Carr Adams & Collier Dubuque Ia
Cole Mfg Co P O Box 2657 Memphis 2 Tenn
Crossett Lbr Co Crossett Ark
Curtis Companies Inc Clinton Ia
Deer Park Pine Industry Inc Deer Park Wash
Dierks Lbr & Coal Co Dierks Bldg 1006 Grand Av Kansas City 6 Mo
Farley & Loetscher Mfg Co Dubuque Iowa
Fordyce Lumber Co Fordyce Ark
Goshen Sash & Door Co Goshen Ind
Gregg & Son Inc Nashua N H
Huttig Mfg Co Dept AL Muscatine Ia
Huttig Sash & Door Co 1206 Vandeventer Av St Louis 10 Mo
Ideal Co Box 889 Waco Tex
Keystone Frame & Mfg Co Box 873 Spokane Wash
Kinzua Pine Mills Co Kinzua Ore
The Long-Bell Lumber Co R A Long Bldg Kansas City 6 Mo and Longview Wash
Malta Mfg Co Malta Ohio
Marquart Millwork Co Oshkosh Wis
Morgan Sash & Door Co 2287 S Blue Island Av Chicago 8 Ill
Pacific Mutual Door Co Tacoma Wash
Ready Hung Door Corp 204 Neil P Anderson Bldg Ft Worth 2 Tex
Rock Island Millwork Co Rock Island Ill
Geo Silbernagel & Sons Co Wausau Wis
Southern Lbr Co Warren Ark
Spokane Pine Prod Co Spokane Wash
Washington Mfg Co P O Box 1544 Tacoma Wash
Weyerhaeuser Sales Co St Paul Minn
The Wheeler Osgood Co Tacoma 1 Wash

DOOR GUARDS

Columbus Brass Mfg Co 620 Dublin Av Columbus 16 Ohio
P & F Corbin Div The American Hdwe Corp New Britain Conn
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Grand Rapids Wire Products Co 501 Front Av N W Grand Rapids 4 Mich
H B Ives Co New Haven 8 Conn
F D Kees Mfg Co Beatrice Neb
Kentucky Metal Products Co Preston St & Aubudon Pk Louisville 4 Ky
Logan Co Inc Louisville Ky
Geo L Mesker Steel Corp Evansville Ind
S Parker Hdwe Mfg Corp 27 Ludlow New York 2 N Y
Russell & Erwin Div The American Hdwe Corp New Britain Conn
F P Smith Wire & Iron Works Inc 2340 N Claybourn Av Chicago 40 Ill
Southern Wire & Iron Works 441 Memorial Drive Atlanta Ga
The Stanley Works New Britain Conn

DOOR KNOCKERS

Ajax Hdwe Mfg Corp Dept 2A 4351 Valley Blvd Los Angeles 32 Cal
J Chesler & Sons Inc 41-49 Varick Av Brooklyn 6 N Y
Clinton Lock Co Clinton Ia
P & F Corbin Div American Hdwe Corp New Britain Conn
Detroit Hdwe Mfg Co 1320 Mt Elliott Av Detroit 7 Mich
H B Ives Co New Haven 8 Conn
Lockwood Hardware Mfg Co Fitchburg Mass
Norwalk Lock Co 395 Broadway NY 13 NY
Nu Tone Inc Dept AL-4 Red Bank & Madison Rd Cincinnati 27 Ohio
S Parker Hardware Mfg Corp 27 Ludlow St New York 2 N Y
Peabody Co Inc 5816 S Hooper Av Los Angeles 11 Cal
Reflecto Letters Inc 411 E 101st St New York 29 N Y
Russell & Erwin Div The American Hdw Corp New Britain Conn
Safe Padlock & Hdwe Co Lancaster Pa
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Slaymaker Lock Co 105 W End Av Lancaster Pa
Standard Bronze Co Bayonne 8 N J
Yale & Towne Mfg Co Hdwe Div Stamford Conn

DOOR STOPS

Aetna Plywood & Veneer Co 1732 N Elston Av Chicago Ill
Ajax Hardware Mfg Co Dept 2A 4351 Valley Blvd Los Angeles 32 Calif
Akron Hdwe Mfg Corp 32nd Av & 57th St Woodside N Y
Champion Hardware Co Geneva Ohio
P & F Corbin Div American Hdwe Corp New Britain Conn
Curtis Cos Inc Clinton Ia
Frantz Mfg Co Sterling Ill
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis 4 Mo
H B Ives Co New Haven 8 Conn
Lockwood Hardware Mfg Co 35 Daniels St Fitchburg Mass
Macklanburg-Duncan Co Oklahoma City 1 Okla
Newell Mfg Co Lowell Mich

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

UNIVERSITY OF MICHIGAN LIBRARIES

The Ney Mfg Co 948 High Av S W Canton 4 Ohio (sliding door)
Norwalk Lock Co 395 Broadway New York 13 N Y
Peabody Co Inc 5816 Hooper Av Los Angeles Calif
Penn Hardware Co Reading Pa
Reflecto Letter Inc 411 E 101st St New York 29 N Y
Russell & Erwin Div The American Hdw Corp New Britain Conn
Safe Padlock & Hardware Co Lancaster Pa
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Slaymaker Lock Co 105 W End Av Lancaster Pa
Standard Bronze Co Bayonne 8 N J
The Stanley Works 195 Lake St New Britain Conn
Yale & Town Mfg Co Hdwe Div Stamford Conn

DOORS—access

Aetna Plywood & Veneer Co 1732 N Elston Av Chicago 22 Ill
Angel Novelty Co Fitchburg Mass
The Donley Bros Co 13923 Miles Av Cleveland 5 Ohio
Grand Specialties Co 3101 W Grand Av Chicago 22 Ill
Ideal Co Box 889 Waco Tex
Inland Steel Products Co (formerly Milcor Steel Co) 4027 W Burnham St Milwaukee 1 Wis
Miami Cabinet Div of Philip Carey Mfg Co Middletown O
Morgan Co Oshkosh Wis
Northwest Door Co Tacoma 1 Wash
Ready Hung Door Corp 204 Neil P Anderson Bldg Ft Worth 2 Tex
Simpson Logging Co 1065 Stuart Building Seattle 1 Wash
Steelcraft Mfg Co 9017 Blue Ash Rd Rossmoyne O

DOORS—accordion

W D Crooks & Sons Williamsport Pa
Holcomb & Hoke Mfg Co Inc 1545 Van Buren St Indianapolis 7 Ind
Hough Shade Corp Janesville Wis
New Castle Porducts Inc New Castle Ind
Orchard Bros Inc 63 Meadow Rd Rutherford N J
Richards-Wilcox Mfg Co Aurora Ill
F P Smith Wire & Iron Wks Inc 2346 Clybourn Av Chgo 14 Ill
Truscon Steel Co Youngstown 1 Ohio

DOORS—ash pit & clean-out

Adams Co Dubuque Ia
Ceco Steel Prods Co 5601 W 26th St Chicago 50 Ill
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Gabriel Steel Co Cat A 13700 Sherwood Detroit 12 Mich
Harris Inc 200 E Long St Columus 15 Ohio
Heatilator Inc 334 E Brighton Av Syracuse 5 N Y
Industrial Iron Wks 6011 S W Macadam Av Portland 2 Ore
Inland Steel Prods Co 4027 W Burnham Milwaukee 1 Wis
International Steel Co Evansville 7 Ind
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Majestic Co 303-C Erie St Huntington Ind
Peerless Mfg Co Louisville Ky
Price Fireplace Heater & Tank Corp 156 West Austin St Buffalo 7 N Y
Superior Fireplace Co 1708 E 15th St Dept AL-521 Los Angeles 21 Calif & 601 N Point Rd Dept AL-521 Baltimore 6 Md
Vestal Stove Co Box 152-A Sweetwater Tenn
Western Fdry Co 2400 S W Water Av Portland 1 Ore
Wheeling Corrugating Co Wheeling W Va

DOORS—basement, metal

Orchard Bros Inc 63 Meadow Rd Rutherford N J

DOORS—basement, metal

The Bilco Co 180 Hallock Av New Blvd Dept 1 Los Angeles 32 Calif

DOORS—coal

Ceco Steel Prods Corp 5601 W 26th St Chicago 50 Ill
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Decatur Iron & Steel Co PO Box 72 Decatur Ala
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Gabriel Steel Co 13700 Sherwood Detroit 12 Mich
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Peerless Mfg Corp Louisville 10 Ky

DOORS—combination

Alumatic Corp of America 2081 S 56th St Milwaukee 14 Wis (aluminum)
Angel Novelty Co Fitchburg Mass
Carr Adams & Collier Co Dubuque Ia
Ceco Steel Products Corp 5601 W 26th St Chicago 50 Ill
Chamberlin Co of America 1254 La Brosse St Detroit 32 Mich
Cole Mfg Co PO Box 2657 Memphis 2 Tenn
Combination Door Co Fond Du Lac Wis
Compo-Miracle Products Co Dept 1-12 15221 W 11 Mile Rd Berkeley Mich
Continental Screen Co 1249 Washington Blvd Detroit 26 Mich
Curtis Cos Inc Clinton Ia
Custom Door Co 1723 N Lake St Rd Aurora Ill
Farley & Loetscher Mfg Co Dubuque Ia
Feather-Lite Mfg Co 8205 Lyndon Av Detroit Mich
Fiddes-Moore & Co 4950 State Line Av Hammond Ind
Fir Door Institute 1205 Rust Bldg Tacoma 2 Wash
Goshen Sash & Door Co Goshen Ind
Gregg & Son Nashua N H
A D Hemphill Co 129 S Franklin Lake City Minn
Huttig Sash & Door Co 1206 Vandeventer Av St Louis 10 Mo
Huttig Mfg Co Muscatine Ia
Kane Mfg Corp Kane Pa
The Long-Bell Lbr Co R A Long Bldg Kansas City 6 Mo & Longview Wash
Marquart Millwork Co Oshkosh Wis
Morgan Co Oshkosh Wis
North-Robbins Plywood Inc 410 Terry Av N Seattle 9 Wash
Northwest Door & Plywood Sales Tacoma 1 Wash
Pacific Mutual Door Co Tacoma Wash
Phenix Mfg Co 4129 N Port Washington Rd Milwaukee 12 Wis
Plywood & Door Mfg Corp 11 W 42nd St New York 13 N Y
Rock Island Millwork Co Rock Island Ill
Royal Glass Wks Corp 50-20 25th St L I C N Y
F C Russell Co 1100 Chester Av Dept 7-AL-42 Cleveland 1 Ohio
F E Schumacher Co Hartville Ohio
Seneca Lbr & Millwork Co Fostoria O
Virginia Metal Products Corp 60 Hudson St New York 13 N Y
Zeesman Plywood Corp 2316 S Santa Fe Av Los Angeles 11 Cal

DOORS—Dry kiln

Moore Dry Kiln Co 1220 W State St Jacksonville 1 Fla
Standard Dry Kiln Co Indianapolis Ind

DOORS—fire

American Welding & Mfg Co 320 Dietz Rd Warren Ohio
Cornell Iron Wks Inc 36th Av & 13th St Long Island City 6 N Y
Detroit Steel Prods Co Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
Donley Bros 13928 Miles Av Cleveland 5 Ohio
Fox Bros Mfg Co 2701 Sidney St St Louis 4 Mo
Harris Preble Fire Doors Inc 4608 W 20th Chicago 50 Ill
International Steel Co Evansville 7 Ind
Kinnear Mfg Co 1191 Fields Av Columbus O
Majestic Co 103 Erie St Huntington Ind
The Mengel Co Inc Louisville 1 Ky
National Kalamein Co Inc 420 Lexington Av Brooklyn 21 N Y
Protexol Corp Kenilworth 4 N J
Richards-Wilcox Mfg Co Aurora Ill
Roddis Plywood Corp Marshfield Wis
Soule Steel Co 1750 Army St San Francisco 24 Cal
Syracuse Fire Door Corp Syracuse N Y
U S Mengel Plywoods Inc Box 1613 Louisville 1 Ky
United States Plywood Corp Dept 615 55 W 44th St New York 18 NY
J G Wilson Corp 370 Lexington Av New York 17 N Y

DOORS—flush

Aetna Plywood & Veneer Co 1732 N Elston Av Chicago 22 Ill
American Plywood Corp Div of Curtis Cos New London Wis and Clinton Ia
American Welding & Mfg Co 320 Dietz Rd Warren Ohio
Atlas Plywood Corp Statler Bldg Boston 16 Mass
Carr Adams & Collier Co Dubuque Ia
W D Crooks & Sons Williamsport Pa
Curtis Companies Inc Clinton Ia
Davis Plywood Corp 12555 Berea Road Cleveland 11 O
Detroit Steel Prods Co Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
Farley & Loetscher Mfg Co Dubuque Ia
Fiddes-Moore & Co 4950 State Line Av Hammond Ind
Fir Door Institute 1205 Rust Bldg Tacoma 2 Wash
General Plywood Corp 3131 W Market St Louisville 12 Ky
Georgia-Pacific Plywood Co Southern Finance Bldg Augusta Ga
Haskelite Mfg Corp 701 Ann N W Grand Rapids 2 Mich
Huttig Mfg Co Box AL Muscatine Ia
Ipik Plywood Co Kenner La
J G Kennedy Lbr Co Seattle 1 Wash
Kochton Plywood & Veneer Co Inc 509 W Roosevelt Rd Chgo 7 Ill
M & M Wood Working Co Resnpreat Div 2301 N Columbia Portland 3 Ore
The Mengel Co Inc 2302 S 4th Louisville 1 Ky
Michigan Door Co 330 Franklin St S W Grand Rapids Mich
Milwaukee Plywood Co 1227 W Bruce St Milwaukee 4 Wis
Mohawk Flush Doors Inc 3383 Hammond Av Elkhart Ind
Morgan Co Oshkosh Wis
Northwest Door & Plywood Sales Tacoma 1 Wash
Paine Lbr Co Ltd Oshkosh Wis
T C Fuller Plywood Co Inc Laurel Miss
Plywood & Door Mfg Corp 11 W 42nd St New York 13 N Y
Ready Hung Door Corp 204 Neil P Anderson Bldg Ft Worth 2 Tex
Roddis Plywood Corp Marshfield Wis
Simpson Logging Co 1065 Stuart Building Seattle 1 Wash
Thomason Plywood Corp Fayetteville N C
United States Plywood Corp Dept 615 55 W 44th New York 18 N Y
Walled Lake Door Co 1225 W Maple Walled Lake Mich
The Wheeler Osgood Co 1216 St Paul Av Tacoma 1 Wash
Wisconsin Flush Door Mfg Co 10101 Lyndon Detroit 21 Mich
Young Wood Products Co 45240 Grand River Av PO Box 166 Novi Mich

DOORS—garage

Calder Mfg Co Inc 630 N Prince St Lancaster 4 Pa
Capitol Products PO Box 1240 Springfield Ill
Carr Adams & Collier Co Dubuque Ia
Crawford Door Co 401 St Jean Av Detroit Mich
Curtis Cos Inc Clinton Ia
Detroit Steel Prods Co Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
Farley & Loetscher Mfg Co Dubuque Ia
Fiddes Moore & Co 4950 State Line Av Hammond Ind
Fir Door Institute 1205 Rust Bldg Tacoma 2 Wash
Georgia-Pacific Plywood Co Southern Finance Bldg Augusta Ga
Hall Enterprises Casco Wis
Howell Mfg Co 7200 Hasbrook Av Philadelphia 11 Pa
The Long-Bell Lbr Co R A Long Bldg Kansas City 6 Mo & Longview Wash
Louden Machinery Co Fairfield Iowa
Marquart Millwork Co Oshkosh Wis
Mauk Seattle Lumber Co Skinner Bldg Seattle 1 Wash
Morrison Steel Products Inc 683 Amherst St Buffalo 7 N Y
Northwest Door & Plywood Sales Tacoma 1 Wash
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Raynor Mfg Co Dixon Ill
Richards Wilcox Mfg Co Aurora Ill
George J Silbernagel 8 S Michigan Av Chgo 3 Ill
Simpson Logging Co 1065 Stuart Bldg Seattle 1 Wash
Starline Inc Harvard Ill
Steel Door Corp 360 So Jessie St Pontiac Mich
Strand Garage Door Div Detroit Steel Products Co Dept AL-4 2244 E Grand Av Detroit Mich
L S Taylor Mfg Co 351 Marietta St N W Atlanta Ga
R L Taylor Inc 12480 Evergreen Rd Detroit 28 Mich
United Products Co 900 N 43rd St Milwaukee 14 Wis
United States Plywood Corp 55 W 44th St NY 18 NY
Wagner Mfg Co Dept ALG-52 Cedar Falls Ia

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

DOORS—garage, overhead type

Barber-Colman Co Rockford Ill
Better-Bilt Door Co Egg Harbor N J
Calder Mfg Co Inc 630 N Prince St Lancaster 3 Pa
Capitol Prods Box 1240 118 S 3rd St Springfield Ill
Carr Adams & Collier Co Dubuque Ia
The Commander Door Inc Holmes Pa
Crawford Door Co 401 St Jean Av Detroit 14 Mich
Curtis Cos Inc Clinton Ia
Davis Plywood Corp 12555 Berea Rd Cleveland 11 Ohio
Detroit Steel Prods Co Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
Essential Products Corp 1127 Madison St Little Chute Wis
Farley & Loetscher Mfg Co Dubuque Ia
Fiddes-Moore & Co 4950 State Line Av Hammond Ind
Fir Door Institute 1205 Rust Bldg Tacoma 2 Wash
Frantz Mfg Co Sterling Ill
Georgia-Pacific Plywood Co Southern Finance Bldg Augusta Ga
Hall Enterprises Casco Wis
Harris Inc 200 E Long St Columbus 15 Ohio
Howell Mfg Co Cottman St & Hasbrook Av Philadelphia 11 Pa
International Steel Co Evansville 7 Ind
Kinnear Mfg Co 1191 Fields Av Columbus Ohio
Marquart Millwork Co Oshkosh Wis
The Monarch Door Folsom Penn
Morrison Steel Products Inc 683 Amherst St Buffalo 7 N Y
National Mfg Co Sterling Ill
Northwest Door & Plywood Sales Tacoma 1 Wash
Phenix Mfg Co 4129 N Port Washington Rd Milwaukee 12 Wis
The Pioneer Co Century Bldg Pittsburgh 22 Pa
Raynor Mfg Co Dixon Ill
Richards-Wilcox Mfg Co Aurora Ill
Rowe Mfg Co Galesburg Ill
Stamping Products & Mfg Co Steel Door Div 14001 Intervale Av Detroit 27 Mich
The Stanley Works 195 Lake St New Britain Conn
Starline Inc Harvard Ill
Strand Garage Door Div Detroit Steel Products Co Dept AL-4 2244 E Grand Blvd Detroit 26 Mich (steel)
L S Taylor Mfg Co 851 Marietta St N W Atlanta Ga
R L Taylor Inc 12480 Evergreen Rd Dertoit 28 Mich
United Products Co 900 N 43rd St Milwaukee 14 Wis
United States Plywood Corp 55 W 44th St NY 18 NY
Wagner Mfg Co Bulletin ALG-52 Cedar Falls Iowa
Steel Door Corp 360 So Jessie St Pontiac Mich
The Wheeler Osgood Co 1216 St Paul Av Tacoma 1 Wash
J G Wilson Corp 370 Lexington Av New York 17 N Y

DOORS—glass, panel

Crane Co 836 S Michigan Av Chicago 5 Ill
Semon Bache & Co 636 Greenwich St NY 14 NY
The Hagemann Companies Inc 2145 Central Pkwy Cincinnati 14 Ohio
The Kawneer Co Niles Mich
Libbey-Owens-Ford Glass Co 1642 Nicholas Bldg Toledo 3 Ohio
Milwaukee Stamping Co 800 S 72nd St Milwaukee 14 Wis
O'Morrow Corp 4509 Firestone Blvd South Gate Calif (fiberglas)
Pittsburgh Plate Glass Co 2126 Grant Bldg Pittsburgh 19 Pa
Royal Glass Works Corp 50-20 25th St Long Island City N Y
Safetee Glass Co Philadelphia 44 Pa
Schacht Associates Inc 415 E 55th St New York 22 N Y
Shower Door Co of America 973 Peachtree St NE Atlanta 5 Ga

DOORS—hardwood

Aetna Plywood & Veneer Co 1732 N Elston Av Chicago 22 Ill
American Plywood Corp Div of Curtis Cos New London Wis and Clinton Ia
American Sash & Door Co Kansas City 1 Mo
Carr Adams & Collier Co Dubuque Iowa
Curtis Cos Inc Clinton Ia
Davis Plywood Corp 12555 Berea Rd Cleveland 11 Ohio
Dyke Bros Little Rock Ark
Farley & Loetscher Mfg Co Dubuque Ia
Fiddes-Moore & Co 4950 State Line Av Hammond Ind
Georgia-Pacific Plywood Co Southern Finance Bldg Augusta Ga
Huttig Mfg Co Muscatine Ia
Huttig Sash & Door Co 1206 Vandeventer Av St Louis 10 Mo
Ipik Plywood Co Kenner La
J G Kennedy Lbr Co 4416 White Henry-Stuart Bldg Seattle 1 Wash
Marquart Millwork Co Oshkosh Wis
The Mengel Co Inc 2302 S 4th Louisville 1 Ky
Michigan Door Co 330 Franklin St SW Grand Rapids Mich
Mohawk Flush Doors Inc 3383 Hammond Av Elkhart Ind
Morgan Company Oshkosh Wis
Paine Lbr Co Ltd Oshkosh Wis
Rock Island Millwork Co Rock Island Ill
Roddis Plywood Corp Marshfield Wis
Thomason Plywood Corp Fayetteville N C
U S Mengel Plyoods Inc Box 1612 Louisville 1 Ky
United States Plywood Corp Dept 615 55 W 44th New York 18 N Y
The Wheeler Osgood Co 1216 St Paul Av Tacoma 1 Wash
Wisconsin Flush Door Mfg Co 10101 Lyndon Detroit 21 Mich
Walled Lake Door Co 1225 W Maple Walled Lake Mich

DOORS—laundry chute

Carr-Adams & Collier Co Dubuque Ia
Donley Bros Co 13928 Miles Av Cleveland 5 O
Gabriel Steel Co Cat A 13700 Sherwood Detroit 12 Mich
Ernest Kluegel & Co 169 W Kellogg Blvd St Paul 2 Minn
Leigh Building Products Div of Air Control Products Inc Coopersville Mich
Majestic Co Huntington Ind
Miami Cabinet Div Philip Carey Mfg Co Middletown Ohio

DOORS—metal

Aetna Steel Products Corp 730 Fifth Av New York 19 N Y
American Welding & Mfg Co 320 Dietz Rd Warren Ohio
The Bilco Co 180 Hallock Av New Haven 5 Conn
Ceco Steel Products Corp 5601 W 26th Chgo 50 Ill
Compo-Miracle Prods Co Dept L-12 15221 W 11 Mile Rd Berkley Mich
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Detroit Steel Prods Co Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
Diebold Inc Canton 2 Ohio
Harris Preble Fire Doors Inc 4608 W 20th St Chicago 50 Ill
International Fireproof Door Co 76-78 Lexington Av Brooklyn 5 N Y
International Steel Co Evansville 7 Ind
Kane Mfg Co Kane Pa
The Kawneer Co Niles Mich
Kinnear Mfg Co 1191 Fields Av Columbus O
Metal Crafters Division Castone Products Co Cedar Rapids Iowa
National Kalamein Co Inc 420 Lexington Av Brooklyn 21 N Y
Newman Bros Inc Dept A-L 660 W 4th St Cincinnati 3 Ohio
Orchard Bros Inc 63 Meadow Rd Rutherford N J
Richards-Wilcox Mfg Co Aurora Ill
F C Russell Co 1100 Chester Av Dept 7-AL-42 Cleveland 1 Ohio
Soule Steel Co 1750 Army St San Francisco 24 Cal
Strand Building Products Co Dept AL-4 2244 E Grand Av Detroit Mich
Steelcraft Mfg Co 9017 Blue Ash Rd Rossmoyne Ohio (one piece steel)
J S Thorn Co 20th & Allegheny Av Phila 32 Pa
Truscon Steel Co Youngstown 1 Ohio
United Steel Fabricators Inc Wooster O
Virginia Metal Products Corp 60 Hudson St New York 13 N Y
Williamsburg Steel Products Co 86 Quay St Brooklyn 22 NY (also metal clad)

DOORS—screen

Alumatic Corp of America 2081 S 56th St Milwaukee 14 Wis (aluminum)
Carr Adams & Collier Co Dubuque Ia
Cole Mfg Co P O Box 2657 Memphis 2 Tenn
Continental Screen Co 1249 Washington Blvd Detroit 26 Mich
Curtis Cos Inc Clinton Ia
Farley & Loetscher Mfg Co Dubuque Ia
Fir Door Institute 1205 Rust Bldg Tacoma 2 Wash
Georgia-Pacific Plywood Co Southern Finance Bldg Augusta Ga
Huttig Mfg Co Box AL Muscatine Ia
Ideal Co Box 889 Waco Tex
Kane Mfg Co Kane Pa
Marquart Millwork Co Oshkosh Wis
Morgan Sash & Door Co 2287 S Blue Island Av Chicago 8 Ill
National Screen Co Inc Suffolk Va
National Screen Door Co Montgomery 3 Ala
Northwest Door & Plywood Sales Inc Tacoma 1 Wash
Phenix Mfg Co 4129 N Port Washington Rd Milwaukee 12 Wis
F W Prentice & Co Adrian Mich
F C Russell Co 1100 Chester Av Dept 7-AL-42 Cleveland 1 Ohio
F E Schumacher Co Hartville O
Seneca Lbr & Millwork Co Fostoria O

DOORS—revolving

Revolvodor Corp 1520 E Slauson Av Los Angeles 11 Cal

DOORS—sidewalk

The Adams Co Dubuque Ia
Bilco Co 164 Hallock Av New Haven 5 Conn
Cincinnati Iron Fence Co 2110 Florence Av Cincinnati 6 Ohio
Edwards Mfg Co 427 Culvert St Cincinnati 2 Ohio
Fries & Son Covington Ky
Logan Co Inc Louisville 6 Ky

DOORS—sliding

Aetna Plywood & Veneer Co 1732 N Elston Av Chicago 22 Ill
American Welding & Mfg Co 320 Dietz Rd Warren O
Curtis Companies Inc Clinton Ia
Dorflo Mfg Corp 1904 First Av Hibbing Minn
Haskelite Mfg Co 701 Ann N W Grand Rapids 2 Mich
J G Kennedy Lbr Co 4416 White-Henry-Stuart Bldg Seattle 1 Wash
Knape & Vogt Mfg Co Grand Rapids Mich
Jay G McKenna Inc Elkhart Ind
Mohawk Flush Doors Inc 3383 Hammond Av Elkhart Ind
National Door Co Michigan Av Kenilworth N J
Orchard Bros Inc 63 Meadow Rd Rutherford N J
Steelcraft Mfg Co 9017 Blue Ash Rd Rossmoyne O
U S Sliding Door Corp 404 E 108th St New York N Y
Virginia Metal Products Corp 60 Hudson St New York 13 N Y

DOORS—softwood

Aetna Plywood & Veneer Co 1732 N Elston Av Chicago 22 Ill
American Sash & Door Co Kansas City 1 Mo
Carr Adams & Collier Co Dubuque Iowa
Cole Mfg Co P O Box 2657 Memphis 2 Tenn
Curtis Cos Inc Clinton Ia
Dyke Bros Little Rock Ark
Farley & Loetscher Mfg Co Dubuque Ia
Fir Door Institute 1205 Rust Bldg Tacoma 2 Wash
Georgia-Pacific Plywood Co Southern Finance Bldg Augusta Ga
Harbor Plywood Corp Hoquiam Wash
Huttig Mfg Co Box AL Muscatine Ia
Huttig Sash & Door Co 1206 Vandeventer Av St Louis 10 Mo
The Long Bell Lumber Co R A Long Bldg Kansas City 6 Mo & Longview Wash
M & M Wood Working Co Resnprest Div 2301 N Columbia Portland 3 Ore
Mauk Seattle Lbr Co Skinner Bldg Seattle 1 Wash
Marquart Millwork Co Oshkosh Wis
The Mengel Co Inc Louisville 1 Ky
Morgan Co Oshkosh Wis
Northwest Door & Plywood Sales Inc Tacoma 1 Wash
Pacific Mutual Door Co Tacoma Wash
Ponderosa Pine Woodwork 38 So Dearborn St Chicago 2 Ill
Roach & Musser Co Muscatine Ia
Robinson Mfg Co Everett Wash
Rock Island Millwork Co Rock Island Ill
Geo J Silbernagel 8 S Michigan Av Chicago 3 Ill
Simpson Logging Co 1065 Stuart Bldg Seattle 1 Wash
U S Mengel Plywoods Inc Box 1612 Louisville 1 Ky
United States Plywood Corp Dept 615 55 W 44th St New York 18 N Y
The Wheeler Osgood Co 1216 St Paul Av Tacoma 1 Wash

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

UNIVERSITY OF MICHIGAN LIBRARIES

Simpson Logging Co 1010 White Bldg Seattle 1 Wash
Winter-Seal Corp-Hayes Wolverine Corp 14575 Meyers Rd & 8525 Livernois Detroit Mich

DOORS—wood, cabinet & cupboard

Aetna Plywood & Veneer Co 1732 N Elston Av Chgo Ill
American Plywood Corp Div of Curtis Cos New London Wis and Clinton Ia
Angel Novelty Co 340 Broad St Fitchburg Mass
Carr Adams & Collier Co Dubuque Ia
Cole Mfg Co P O Box 2657 Memphis 2 Tenn
Curtis Cos Inc Clinton Ia
Farley & Loetscher Mfg Co Dubuque Ia Tenn
Fiddes-Moore & Co 4950 State Line Av Hammond Ind
Fir Door Institute 1205 Rust Bldg Tacoma 2 Wash
Georgia-Pacific Plywood Co Southern Finance Bldg Augusta Ga
Huttig Mfg Co Box AL Muscatine Ia
Ipik Plywood Co Box 248 Kenner La
I-XL Furniture Co Goshen Ind
J G Kennedy Lbr Co 4416 White-Henry-Stuart Bldg Seattle 1 Wash
Kinzua Pine Mills Co Kinzua Ore
Long-Bell Lbr Co PO Box 1079 Longview Wash & R A Long Bldg Kansas City Mo
M & M Wood Working Co Resnprest Div 2301 N Columbia Portland 3 Ore
Marquart Millwork Co Oshkosh Wis
The Mengel Co Inc Louisville 1 Ky
Morgan Co Oshkosh Wis
Northwest Door & Plywood Sales Inc Tacoma 1 Wash
Pacific Mutual Door Co Tacoma Wash
Revolvodor Corp 1520 E Slauson Av Los Angeles 11 Calif
Roddis Plywood Corp Marshfield Wis
Geo J Silbernagel 8 S Michigan Av Chicago 3 Ill
U S Mengel Plywoods Inc Box 1612 Louisville 1 Ky
United States Plywood Corp Dept 615 55 W 44th St New York 18 N Y

DOWELS—wood

Chicago Wood & Plastic Plants 4201 W Irving Park Chicago 41 Ill
R F Cooke Mfg Co Orange Mass
Curtis Cos Clinton Ia
Despres Dowel Mfg Co Grand Rapids Mich
Dowel House 6315 Yale Av Chicago 21 Ill
Englewood Dowel Co 6315 Yale Av Chicago 21 Ill
Fordyce Lumber Co Fordyce Ark
The Long-Bell Lbr Co R A Long Bldg Kansas City 6 Mo & Longview Wash
Grand Rapids Dowel Wks 701 W Burton Grand Rapids Mich
Holt Hardwood Co Oconto Wis
McMinnville Handle Co McMinnville Tenn
Nashotah Moulding & Mfg Co Nashotah Wis
George J Silbernagel 8 S Michigan Av Chgo 3 Ill
South Bend Dowel Wks South Bend Ind
H A Stiles Co 174 Portland St Boston 14 Mass

DRAFTING SUPPLIES

Eugene Dietzgen Co 2425 N Sheffield Av Chgo Ill
Chas M Higgins & Co 271 9th Brooklyn N Y
Keuffel & Esser Co Hoboken N J
Frederick Post Co 155 E Ohio Chgo Ill
H E Smith Co Adrian Mich
H A Stiles Co 174 Portland St Boston 14 Mass
Universal Drafting Machine Corp 7960 Lorain Av Cleveland 2 Ohio
Warren-Knight Co 136 N 12th St Philadelphia 7 Pa

DRILL PRESSES

Boice Crane Co 930 W Central Av Toledo 6 Ohio
Chase Turbine Mfg Co Orange Mass
Delta Power Tool Div Rockwell Mfg Co 693-D E Vienna Av Milwaukee 1 Wis
Shopmaster Inc 1214 S 3rd St Minneapolis 15 Minn
South Bend Lathe Wks South Bend 22 Ind
Walker-Turner Div Kearney & Trecker Corp Plainfield N J

DRILLS—masonry

Ackerman-Johnson Co 625 W Jackson Blvd Chicago 6 Ill
Arro Expansion Bolt Co PO Box 338 Marion O
Chicago Expansion Bolt Co 1338 W Concord Pl Chicago 22 Ill
Chicago Pneumatic Tool Co 6 E 44th St NY 17 NY
Damascus Steel Prod Corp Rockford Ill
Goldblatt Tool Co 1924 Walnut St Kansas City Mo
Hood Bros 4326 Orchard St Philadelphia 24 Pa
Milwaukee Electric Tool Corp 5360 W W State St Milwaukee 6 Wis
New England Carbide Tool Co Inc Cambridge 39 Mass
Paine Co 2951 Carroll Av Chicago 12 Ill
Proto Tools 2209 Santa Fe Av Los Angeles 54 Calif
Red Devil Tools 130 Coit St Irvington 11 N J
Rainey-Tool Grove City Pa
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
Star Expansion Products Co Inc 147 Cedar St NY 6 NY
Vulcan Tool Mfg Co Quincy 69 Mass

DRILLS—portable electric

Black & Decker Mfg Co Dept H-640 Towson 4 Md
Bradford Machine Tool Co 670 Evans St Cincinnati Ohio
Chicago Pneumatic Tool Co 6 E 44th St New York 17 N Y
Cincinnati Electrical Tool Co Cincinnati O
Fasco Industries Inc 212 Augusta St Rochester 2 N Y
Goldblatt Tool Co 1924 Walnut St Kansas City Mo
Independent Pneumatic Tool Co Aurora Ill
Mall Tool Co 7733 South Chicago Av Chicago 19 Ill
Millers Falls Co Greenfield Mass
Milwaukee Electric Tool Corp 5364 W State St Milwaukee 8 Wis
Portable Electric Tools Inc 335 W 83rd St Chicago 20 Ill
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
Skilsaw Inc 5033 Elston Av Chicago 30 Ill
Speed Way Mfg Co 1834 S 52nd Av Cicero 50 Ill
Stanley Works New Britain Conn
Syntron Co 940 Lexington Av Homer City Pa
Wodack Electric Tool Corp 4627 W Huron Chicago Ill

DRILLS—wood

Bradford Machine Tool Co 670 Evans St Cincinnati Ohio
Champion Blower & Forge Co Lancaster Pa
De Walt Inc 51 Fountain Av Lancaster Pa
DuBois Fence & Garden Co Inc Ridgefield N J
Greenlee Tool Co Div of Greenlee Bros & Co 2136 12th St Rockford Ill
Milwaukee Electric Tool Corp 5364 W State St Milwaukee 8 Wis
Stanley Tools Div of The Stanley Works 111 Elm St New Britain Conn
Syracuse Twist Drill Co Univ Sta Box 38 Syracuse N Y

DRIVERS—glazier's point

Fletcher Terry Co 592 South St Forestville Conn
Glaziers' Tool Mfg Co 611 W Adams Chgo 6 Ill
Red Devil Tools Irvington 11 N J
Sommer & Maca Glass Machinery Co 3604 S Oakley Av Chicago 9 Ill

DRY KILNS

Grand Rapids Dry Kiln Co 1525 Jefferson Av Grand Rapids Mich
Moore Dry Kiln Co 1220 W State St Jacksonville 1 Fla
Richmond Engineering Co Inc Richmond Va
Risser Dry Kiln Engineers Inc Box 91 Little Rock Ark
Standard Dry Kiln Co Indianapolis Ind

DUST CHUTES

Allen Steel Products 12911 Hillview Detroit 27 Mich
Allington & Curtis Mfg Co Saginaw Mich
Gichner Inc 1900 W Kendall St NE Washington 2 D C
Lippman Engineering Wks 4603 W Mitchell Milwaukee 14 Wis

DUST COLLECTION SYSTEMS

Allington & Curtis Mfg Co Saginaw Mich
American Wheelabrator & Equipment Co 737 S Byrkit St Mishawaka Ind
Chase Turbine Mfg Co Orange Mass
Connecticut Blower Co P O Box 834 Hartford 1 Conn
Detroit Sheet Mtl Wks Detroit Mich
Gichner Inc 1900 Kendall St NE Washington 2 D C
Houston Blow Pipe & Sheet Metal Works Box 1692 Houston Tex
Kirk & Blum Mfg Co Cincinnati O
Lippman Engineering Wks 4603 W Mitchell Milwaukee 14 Wis
Multiplex Machy Corp Elmore Ohio
Ohio Blow Pipe Co 1727 Doan Av Cleveland Ohio
St Louis Blow Pipe & Heater Co 1948 N 9th St St Louis 6 Mo

DUSTERS—insecticide

Camp Chemical Co Inc 2nd Av & 13th St Brooklyn N Y
A B Farquhar Co 142 N Duke St York Pa
Hoffman Lion Mills Co Inc 38 Hillside St Fall River Mass
H D Hudson Mfg Co 589 E Illinois St Chicago 11 Ill
Lippmann Engineering Wks 4603 W Mitchell St Milwaukee 14 Wis
Lowell Mfg Co Dept 63 589 E Illinois St Chicago 11 Ill
D B Smith & Co 435 Main St Utica N Y
L M Thornton Mfg Co Inc 2825 E 18th St Kansas City 1 Mo

EDGERS—floor

American Floor Surfacing Machine Co 521 S St Clair St Toledo 3 Ohio
Clarke Sanding Machine Co 464 Clay St Muskegon Mich
Florboss-Habit Co 4181 W Montrose Chicago 41 Ill
Goldblatt Tool Co 1924 Walnut St Kansas City 8 Mo
Hilger Co St Cloud Minn
Holt Mfg Co 651 20th St Oakland 12 Cal
Porter-Cable Machine Co 1714 N Salina St Syracuse 8 N Y
Red Devil Tools Irvington 11 N J
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
Skilsaw Inc 5033 Elston Av Chicago 30 Ill
R D Werner Co Inc 295 Fifth Av New York 16 N Y

EDGERS—sawmill

Allis Chalmers Mfg Co Milwaukee Wis
American Saw Mill Machinery Co Hackettstown N J
Belsaw Machy Co 315 Westport Rd Kansas City Mo
Corinth Machinery Co Corinth Miss
Corley Mfg Co Chattanooga 1 Tenn
Cunningham Mchy Corp 735 Ricou St Shreveport La
The Filer & Stowell Co 147 E Becher St Milwaukee 7 Wis
Frick Co Dept 75 Waynesboro Penna
Lane Mfg Co Montpelier Vermont
Miner Edger Works Inc Meridian Miss
R J Tower Iron Wks Greenville Mich

ENAMEL

American Marietta Co 43 E Ohio Chgo 11 Ill
Boston Varnish Co Boston 49 Mass
Bruning Bros Inc 4209 E Chase St Baltimore 6 Md
Devoe & Raynolds Co Inc 787 First Av New York 17 N Y
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Elliott Paint & Varnish Co 4525 W 5th Av Chicago 24 Ill
Gillespie Varnish Co Dey & Howell Sts Jersey City 6 N J
Glidden Co Cleveland O
Harrison Paint & Varnish Co Canton 1 Ohio
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
R F Johnson Paint Co 3925 Huston Av Cincinnati 12 Ohio
W W Lawrence & Co 1124 W Carson St Pittsburgh 19 Pa
Lowe Bros Co Dayton 2 Ohio
John Lucas & Co Philadelphia Pa
John W Masury & Son Inc Baltimore Md
Benjamin Moore & Co 511 Canal NY 13 NY
Murphy Paint Div Interchemical Corp Newark 1 N J
The O'Brien Corp Dept L-4 South Bend 21 Ind
Patterson Sargent Co 1325 E 38th St Cleveland 14 Ohio
Peaslee Gaulbert Paint & Varnish Co 223 N 15th St Louisville Ky
Pittsburgh Plate Glass Co 632 Duquesne Way Dept L-4 Pittsburgh 22 Pa
Pratt & Lambert Inc 75 Tonawanda Buffalo 7 N Y

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Rogers Paint Products Inc 8250 St Aubin St Detroit 11 Mich
Sapolin Paints Inc 229 E 42nd St New York 17 N Y
Sargent-Gerke Co Indianapolis 6 Ind
Sewall Paint & Varnish Co 1306 River St Dallas 2 Tex
Sherwin Williams Co Cleveland O
Standard Industrial Products Inc Box 325 Evansville 4 Ind
Steelcote Mfg Co 3418 Gratiot St Louis 3 Mo
20th Century Paint & Varnish Corp 456 Driggs Av Brooklyn 11 N Y
U S Gypsum Co 300 W Adams Chicago 6 Ill
Valentine & Co Inc 11 E 36th NY 16 NY
Vita-Var Corp 1180 Raymond Blvd Newark 2 N J
Wadsworth Howland & Co 141 Federal Boston Mass
Wilbur & Williams Co 130 Lincoln St Boston 35 Mass

ENGINES—diesel

Buda Co Harvey Ill
Caterpillar Tractor Co Peoria 8 Ill
Cleveland Diesel Engine Div General Motors Corp Cleveland 11 Ohio
Cummins Engine Co Columbus Ind
Fairbanks Morse & Co 600 S Michigan Av Chicago Ill
Hill Diesel Engine Co Lansing Mich
International Harvester Co 180 N Michigan Chgo Ill
Nordberg Mfg Co 3073 S Chase Av Milwaukee 7 Wis
Waukesha Motor Co Waukesha Wis
Witte Engine Work Div of Oil Well Supply Co U S Steel Corp Sub Kansas City 2 Mo

ENGINES—gasoline

Allis-Chalmers Mfg Co Milwaukee 1 Wis
Briggs & Stratton Corp 2711 N 13th St Milwaukee 1 Wis
Buda Co Harvey Ill
Fairbanks Morse & Co 600 S Michigan Av Chgo Ill
Fuller & Johnson Mfg Co Madison Wis
Homelite Corp Port Chester N Y
Internat'l Harvester Co Inc 180 N Michigan Av Chgo Ill
Kohler Co Kohler Wis
Novo Engine Co Lansing 5 Mich
Waukesha Motor Co Waukesha Wis
Witte Engine Co Div of Oil Well Supply Co U S Steel Sub Kansas City 3 Mo

ENGINES—steam

American Hoist & Derrick Co 63 S Robert St Paul 1 Minn
Erie City Iron Wks Erie Pa
The Filer & Stowell Co 147 E Becher St Milwaukee 7 Wis
Johnson Mfg Co Inc Fox Av & Holly St Seattle 8 Wash
Prescott Co Menominee Mich

EXPANSION JOINT—bituminous fibre board

Asbestos Asphalt Insulation Inc 4700 Fullerton Av Chicago 47 Ill
Celotex Corp 120 S LaSalle St Chicago 3 Ill
Keystone Asphalt Prods Co 101 E Ontario St Chicago 11 Ill
Williams Form Engineering Corp 1501 Madison Av SE Grand Rapids Mich

FANS—attic, kitchen, exhaust

Airmaster Corp 4317 Ravenswood Av Chicago 13 Ill
American Blower Corp Detroit 32 Mich
Bar-Brook Mfg Co Inc 6135 Linwood Av Shreveport La
Berns Mfg Co 3050 N Rockwell St Chicago 18 Ill
Philip Carey Mfg Co Dept AL-4 Cincinnati 4 Ohio
Clarage Fan Co Kalamazoo 16 Mich
Delco Appliance Div General Motors Sales Corp Rochester N Y
Diehl Mfg Co 1124 Finderne Av Somerville N J
Emerson Elec Mfg Co 8100 Florissant Av St Louis 21 Mo
Fasco Industries Inc 212 Augusta St Rochester 2 N Y
General Elec Mfg Co Schenectady 5 N Y
Hunter Fan & Ventilating Co Box 2858 Memphis 2 Tenn
Huntington Industries 2368 Prospect St Memphis Tenn
Ilg Electric Ventilating Co 2850 N Pulaski Rd Chicago 41 Ill
Lau Blower Co 2001 Home Av Dayton 7 Ohio
Herman Nelson Corp 222 W Adams St Chgo 6 Ill
Nu Tone Inc Dept AL-4 Red Bank & Madison Rd Cincinnati 27 Ohio
Samson-United Corp Rochester N Y
Shepler Mfg Co 1312 Sheffield St Pittsburgh Pa
Signal Electric Mfg Co Menominee Mich
Stewart Mfg Co 3205 E Washington St Indianapolis Ind
O A Sutton Corp 1812 W 2nd St Wichita Kans
The Trane Co LaCrosse Wis
Universal Blower Co 1090 S Adams Av Birmingham Mich
Westinghouse Electric Corp 653 Page Blvd Springfield 2 Mass

FANS—dry kiln

American Blower Corp Detroit 32 Mich
Champion Blower & Forge Co Lancaster Pa
Clarage Fan Co Kalamazoo 16 Mich
Grand Rapids Dry Kiln Co 1525 Jefferson Av Grand Rapids 7 Mich
Moore Dry Kiln Co 1220 W State St Jacksonville 1 Fla
Standard Dry Kiln Co Indianapolis Ind
The Trane Co La Crosse Wis

FASTENERS—door chain

Champion Hardware Co Geneva Ohio
Clinton Lock Co Clinton Ia
P & F Corbin Div The American Hardware Corp New Britain Conn
Fiwale Equipment Mfg Co 105 Reade St NY 13 NY
H B Ives Co New Haven 8 Conn
National Brass Co Grand Rapids Mich
Penn Hardware Co Reading Pa
Reflecto Letters Inc 411 E 101st St New York 29 N Y
Russell & Erwin Div The American Hardware Corp New Britain Conn
Safe Padlock & Hdwe Co Lancaster Pa
Standard Bronze Co Bayonne 8 N J
Yale & Towne Mfg Co Stamford Conn

FASTENERS—wallboard, shingle

E G Building Fasteners Corp 101 Park Av New York 17 N Y

FASTENERS—wood joint

Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
E G Building Fasteners Corp 101 Park Av New York 17 N Y
F D Kees Mfg Co Beatrice Nebr
Knape & Vogt Mfg Co Grand Rapids 4 Mich
Charles O Larson Co Sterling Ill
E B Packard Co Inc 139 Cedar St New York 6 N Y
The Stanley Wks New Britain Conn
Superior Fastener Corp 2949 N Elston Av Chicago 18 Ill
Timber Engineering Co 1319 18th St N W Washington 6 D C

FEEDS—belt, sawmill

Corinth Machinery Co Corinth Miss
Corley Mfg Co Chattanooga 1 Tenn
Cunningham Machy Corp 735 Ricou St Shreveport La
Yates-American Machine Co Beloit Wis

FELT—asphalt roofing

The Barrett Div Allied Chemical & Dye Corp 40 Rector St NY 6 NY
Bird & Son Dept AL-4 E Walpole Mass
The Flintkote Co Inc 30 Rockefeller Plaza N Y 20 N Y
Ford Roofing Products Co 188 W Randolph Chicago 1 Ill
Globe Roofing Prod Co Inc Whiting Ind
Johns-Manville Corp Box 290 22 E 40th N Y 16 N Y
The Lehon Co 4425 S Oakley Chgo 9 Ill
Logan-Long Co 6600 S Central Av Chicago 38 Ill
Ruberoid Co 500 Fifth Av New York 18 N Y
U S Gypsum Co 300 W Adams Chicago 6 Ill

FENCE—chain link

Atlas Fence Co Richmond & Pickwick Sts Philadelphia 34 Pa
Anchor Post Products Inc 6500 Eastern Av Baltimore 24 Md
Century Fence Co Waukesha Wis
Chain Link Fence Corp 1629 W 31st Chgo Ill
Cincinnati Iron Fence Co Inc 2110 Florence Av Cincinnati 6 Ohio
Colorado Fuel & Iron Corp Wickwire Spencer Steel Div 500 Fifth Av New York 6 N Y
Continental Steel Corp Kokomo Ind
Cyclone Fence Div American Steel & Wire Co U S Steel Corp Sub P O Box 260 Waukegan 1 Ill
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Mid-States Steel & Wire Co Crawfordsville Ind
Nichols Wire & Steel Co Davenport Iowa (steel and aluminum)
Page Steel & Wire Div American Chain & Cable Co Inc Monessen Pa
Pittsburgh Steel Co Pittsburgh Pa
bourn Av Chicago 14 Ill
Southern Wire & Iron Works 441 Memorial Drive S E Atlanta Ga
Stewart Iron Wks Co Inc 1951 Stewart Block Cincinnati 1 Ohio

FENCE—rustic

Anchor Post Prods Inc 6500 Eastern Av Baltimore 24 Md
Century Fence Co Waukesha Wis
Lincraft Inc Burlington N J
Mac Gillis & Gibbs Co 324 E Wisconsin Av Milwaukee 2 Wis
Wood Products Co 421 Phillips Av Toledo 12 O
Whiting Fence Co 130 Sixth St Cambridge 42 Mass

FENCE—snow

Capitol Fence Co 735 N Water Milwaukee 2 Wis
Concord Woodworking Co Inc West Concord Mass
E S Gaynor Lumber Co Sioux City 1 Iowa
Illinois Wire & Mfg Co P O Box A-1396 Joliet Ill
Kinzua Pine Mills Co Kinzua Ore
Lincraft Inc Burlington N J
Mattson Wire & Mfg Co Inc Joliet Ill
Nebraska Bridge Supply & Lumber Co Omaha 5 Neb
Rowe Mfg Co Dept AL Galesburg Ill
Wheeler-Arnold Co Wittenberg Wis

FENCE—steel lawn

American Steel & Wire Co Rockefeller Bldg 614 Superior Av N W Cleveland 13 Ohio
Anchor Fence Prods Inc 6500 Eastern Av Baltimore 24 Md
Bethlehem Steel Co Bethlehem Pa
Cincinnati Iron Fence Co Inc 2110 Florence Av Cincinnati 6 Ohio
Clay Equipment Corp Cedar Falls Ia
R G Coffman Co Inc 2809 N Orange Av Orlando Fla
Colorado Fuel & Iron Corp Denver 1 Colo
Columbia Steel Co Russ Bldg San Francisco 6 Cal
Continental Steel Corp Kokomo Ind
Cyclone Fence Div American Steel & Wire Co U S Steel Corp Sub Box 260 Waukegan Ill
Keystone Steel & Wire Co Peoria Ill
Mid-States Steel & Wire Co Crawfordsville Ind
Nichols Wire & Aluminum Co Davenport Iowa
Page Steel & Wire Div American Chain & Cable Co Inc Monessen Pa
Pittsburgh Steel Co Pittsburgh Pa
Stewart Iron Wks Co Inc 1951 Stewart Block Cincinnati O
Tennessee Coal Iron & RR Co U S Steel Corp Sub Box 2634 Birmingham 2 Ala

FENCE—wood picket

Atlas Fence Co Philadelphia Pa
Capitol Fence Co 735 N Water Milwaukee 2 Wis
Concord Woodworking Co Inc 457 Main St West Concord Mass
The Davis & Siehl Co Cincinnati 23 O
Fordyce Lumber Co Fordyce Ark
E S Gaynor Lumber Co Sioux City 1 Iowa
Illinois Wire & Mfg Co P O Box A-1396 Joliet Ill
Lincraft Inc Burlington N J
Mac Gillis & Gibbs Co 324 E Wisconsin Av Milwaukee 2 Wis
Mattson Wire & Mfg Co Joliet Ill
Nebraska Bridge Supply & Lumber Co Omaha 5 Neb
Redwood Garden Materials Co Los Angeles 21 Cal
Rowe Mfg Co Dept AL Galesburg Ill
Texas Fence Co Rt 10 Box 388 Dallas Tex
E A Vandy 14105 Merchandise Mart Plaza Chicago 54 Ill
Weyerhaeuser Sales Co St Paul 1 Minn
Whiting Fence Co 130 Sixth Av Cambridge 42 Mass
Wood Products Co 421 Phillips Av Toledo 12 Ohio

FENCE—woven wire, barb wire

American Steel & Wire Co Rockefeller Bdg 614 Superior Av N W Cleveland 13 Ohio
Atlas Fence Co Richmond & Pickwick Sts Philadelphia 34 Pa
Bethlehem Steel Co Bethlehem Pa
Colorado Fuel & Iron Corp Denver Colo

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Columbia Steel Co Russ Bldg San Francisco 6 Cal
Continental Steel Corp Kokomo Ind
Copperweld Steel Co Glassport Pa
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Jones & Laughlin Steel Corp Pittsburgh Pa
Keystone Steel & Wire Co Peoria Ill
Mid-States Steel & Wire Co Crawfordsville Ind
Nichols Wire & Aluminum Co Davenport Iowa
Northwestern Steel & Wire Co Sterling Ill
Pittsburgh Steel Co Pittsburgh Pa
Republic Steel Corp Cleveland 1 Ohio
Sheffield Steel Corp Kansas City Mo
Stewart Iron Wks Co Inc 1851 Stewart Block Cincinnati 1 Ohio
Tennessee Coal Iron & RR Co U S Steel Corp Sub Box 2634 Birmingham 2 Ala

FENCE CONTROLLERS—electric

Coburn Mfg Co Whitewater Wis
Electrite Fence Co Whitewater Wis
Gardner Mfg Co Horicon Wis
Guaranteed Products Inc Wellington Ohio
Prime Mfg Co Milwaukee Wis
Red Devil Tools Irvington 11 N J

FILERS—saw, band, circular, etc

Chattanooga Saw Wks 1512 Williams Chattanooga Tenn
Foley Mfg Co 3300 Fifth St Northeast Minneapolis 18 Minn
Hanchett Mfg Co Big Rapids Mich
R Hoe & Co Inc 910 E 138th St New York 54 N Y
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y

FILES

American Swiss File & Tool Co Elizabeth N J
E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Chelsea File Wks Norwich Conn
Henry Disston & Sons Inc 425 Tacony Philadelphia 35 Pa
Heller Brothers Co Newark 4 N J
R Hoe & Co Inc 910 E 138th St New York 54 N Y
Nicholson File Co Providence R I
Fayette R Plumb Inc 4837 James St Philadelphia 37 Pa
Red Devil Tools Irvington 11 N J
Sandvik Saw & Tool Div of Sandvik Steel Inc 47 Warren St New York 7 N Y
Simonds Saw & Steel Co Fitchburg Mass

FILLER—crack

Acme White Lead & Color Wks 8250 St Aubin Av Detroit 11 Mich
American Varnish Co 1138 N North Branch St Chgo 22 Ill
Armstrong Cork Co 4704 Ocean Av Lancaster Pa
Blue Ridge Talc Co Inc Henry Va
Boston Varnish Co Boston 49 Mass
Boyle-Midway Inc 22 E 40th St New York 16 N Y
Chicago Bronze & Color Works 2639 W Grand Av Chicago 12 Ill
Donald Durham Co PO Box 804 Des Moines 4 Ia
Felton Sibley & Co Inc 136 N 4th St Philadelphia 6 Pa
Lowe Bros Co Dayton 2 Ohio
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Reardon Co St Louis 6 Mo
Savogran Co 25 Huntington Av Boston 16 Mass
Schalk Chemical Co 351 E 2nd St Los Angeles 13 Cal
Smooth-On Mfg Co 572 Communipaw Av Jersey City 4 N J
Technical Supply Co 1911 University Av Palo Alto Cal
United Gilsonite Labs Scranton 1 Pa
X-Pando Corp 43-15 36th St LIC 1 N Y
Webb Products Co San Bernardino Calif & Norcross Ga

FILLER STRIPS

Fabricated Products Co Box 8005 Pittsburgh 16 Pa
Toch Bros Inc 2600 Richmond Terr Staten Island 3 N Y

FILLER—wood

Acme White Lead & Color Wks 8250 St Aubin Av Detroit 11 Mich
American Varnish Co 1136 N North Branch St Chgo 22 Ill
Boyle-Midway Inc 22 E 40th St New York 16 N Y
E L Bruce Co Box 397 Memphis Tenn
Breinig Bros Inc Hoboken N J
Bruning Bros Inc 4209 E Chase St Baltimore 6 Md
Chicago Bronze & Color Wks 2639 W Grand Av Chicago 12 Ill
Chi-Namel Paint & Varnish Co Minneapolis Minn
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Donald Durham Co PO Box 804 Des Moines 4 Ia
Elliott Paint & Varnish Co 4525 W Fifth Av Chicago 24 Ill
W P Fuller & Co 301 Mission San Francisco 19 Cal
Keystone Varnish Co 71 Otsego St Brooklyn 31 N Y
Lowe Bros Co Dayton 2 Ohio
Minnesota Paints Inc Minneapolis Minn
Peaslee-Gaulbert Paint & Varnish Co 223 N 15th St Louisville Ky
Schalk Chemical Co 351 E Second St Los Angeles 12 Calif
Seidlitz Paint & Varnish Co 18th & Garfield Sts Kansas City Mo
Tamms Industries Inc 228 N LaSalle St Chicago Ill
Technical Supply Co 1911 University Av Palo Alto Calif
Webb Products Co San Bernardino Calif and Norcross Ga
The Wilbur & Williams Co Boston 16 Mass

FINANCING SERVICE

Allied Bldg Credits Inc Box 3426 Terminal Annex Los Angeles 54 Cal
Commercial Credit Co Baltimore 2 Md
Douglas-Guardian Warehouse Corp 118 N Front New Orleans 1 La
Investors Syndicate Roanoke Bldg Minneapolis Minn
Lawrence Warehouse Co WP Story Bldg Los Angeles Calif

FIRE ESCAPES

Artcraft Ornamental Iron Co 724 E Hudson Columbus O
Davy Automatic Fire Escape Co PO Box 51 Colvin Station Syracuse 5 N Y
Grand Rapids Wire Products Co 501 Front Av N W Grand Rapids 4 Mich
Geo L Mesker Steel Corp Evansville 8 Ind
Metal Crafters 1756 E Av NE Cedar Rapids Iowa
St Paul Foundry & Mfg Co St Paul 3 Minn
Wm J Samcoe Iron Co 917 Military Rd Kenmore 17 N Y
F P Smith Wire & Iron Wks 2340 Clybourn Av Chicago 40 Ill

FIRE ESTINGUISHERS

American La France Foamite Corp Elmira N Y
Elkhart Brass Mfg Co Elkhart Ind
Fyr-Fyter Co Dayton 1 O
General Detroit Corp 2272 E Jefferson Av Detroit 7 Mich
International Fire Equip Corp 94 State Staten Island 10 N Y
Walter Kidde & Co Inc Belleville N J
Pyrene Mfg Co 560 Belmont Av Newark 8 N J
Safety Fire Extinguisher Co 291 7th NY NY
D B Smith & Co 435 Main St Utica N Y

FIREPLACE EQUIPMENT

Bennett-Ireland 449 Pine St Norwich N Y
Chattanooga Implement & Mfg Co Chattanooga Tenn
Colonial Brass Co Middleboro Mass
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Hart Products Inc 915 E Kentucky St Louisville 4 Ky
Heatilator Inc 334 E Brighton Av Syracuse N Y
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Majestic Co 303-C Erie St Huntington Ind
Shepler Mfg Co 1312 Sheffield St Pittsburgh 33 Pa (logs, electric)
F P Smith Wire & Iron Wks 2340 Clybourn Av Chicago 14 Ill
Superior Fireplace Co Dept AL-521 1709-D East 15th St Los Angeles 21 Cal & Dept AL-521 601 North Point Road Baltimore 6 Md
Vestal Stove Co Box 152-A Sweetwater Tenn
Western Foundry Co 2400 SW Water St Portland 1 Ore

FIREPLACE UNITS

Bennett-Ireland 449 Pine St Norwich N Y
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Heatilator Inc 334 E Brighton Av Syracuse N Y
Majestic Co 303-C Erie St Huntington Ind
Northwest Metal Products Inc 55 Spokane St Seattle 4 Wash
Price Fireplace Heater & Tank Corp 156 West Austin St Buffalo 7 N Y
Readybuilt Prods Co 1707 McHenry St Baltimore 23 Md
Superior Fireplace Co 1708 East 15th St Dept AL-521 Los Angeles 21 Calif & 601 N Point Rd Dept AL-521 Baltimore 6 Md

FIREPLACES—outdoor

Bennett-Ireland Inc 449 Pine St Norwich N Y
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Majestic Co 303-C Erie St Huntington Ind
Mexico Refactories Co Mexico Mo
Price Fireplace Heater & Tank Corp 156 West Austin St Buffalo 7 N Y
Western Foundry Co Portland 1 Ore

FIREPROOFING CHEMICALS—wood

Acme Flame Control Corp 3051 Rosslyn St Los Angeles 65 Cal
American Lumber & Treating Co 1671 McCormick Bldg Chicago 4 Ill
Boyer Chemcial Laboratory Co 2232 S Wabash Chicago 16 Ill
Camp Chemical Co Inc 2nd Av & 13th St Brooklyn 19 N Y
E I du Pont de Nemours & Co Inc Wilmington 98 Del (fire retardants)
Koppers Co Inc Pittsburgh 19 Pa
Monsanto Chemical Co 1700 S Second St Louis 4 Mo
Protexol Corp 50 Market St Kenilworth 4 N J
Wayne Chemical Products Co Copeland & MCRR Detroit 17 Mich
The Wilbur & Williams Co Boston 16 Mass (fire resistant paint)

FIXTURES—store display

E O Bulman Mfg Co Inc 1705 Elizabeth NW Grand Rapids 2 Mich
Garden City Plating & Mfg Co 1750 N Ashland Chicago 22 Ill
W C Heller & Co Cat #40A 1050 Bryant St Montpelier O
Lyon Metal Products 450 Madison Av Aurora Ill
Multiplex Display Fixture Co 910-20 N 10th St St Louis Mo
Reflector Hardware Corp Dept AL-D 2245 S Western Av Chicago 8 Ill
Technical Glass Co Inc 2050 E 48th St Los Angeles 11 Cal
Warner Mfg Co 801 16th Av SE Minneapolis 14 Minn

FLASHING—roof, wall

American Brass Co Waterbury Conn
Barrett Div Allied Chem & Dye Corp 40 Rector N Y 6 N Y
Philip Carey Mfg Co Dept AL-4 Lockland Cincinnati 15 Ohio
Ceco Steel Products Corp 5601 W 26th Chgo 50 Ill
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Cheney Industries Trenton 8 N J
Illinois Zinc Co 2959 W 47th St Chicago 32 Ill
Inland Steel Products Co (formerly Milcor Steel Co) 4027 W Burnham St Milwaukee 1 Wis
Johns-Manville Corp Box 290 22 E 40th N Y 16 N Y
Lehon Co 4425 S Oakley Chgo 9 Ill
Mid-States Steel & Wire Co Crawfordsville Ind
Nichols Wire & Aluminum Co Davenport Iowa
Northwest Metal Prods Inc 55 Spokane St Seattle 4 Wash
Penn Supply & Metal Corp Philadelphia Pa
Republic Steel Corp Cleveland 1 Ohio
Revere Copper & Brass Inc 230 Park Av New York 17 N Y
Reynolds Metals Co Bldg Products Section 2002 S 9th St Louisville 1 Ky
The Richkraft Co 228 N La Salle Chgo 1 Ill
Sealcon Products Inc Minneapolis 2 Minn
Southern States Iron Roofing Co PO Box 1159 Savannah Ga
Wasco Flashing Co Cambridge Mass
Wheeling Corrugating Co Wheeling W Va

FLOOR RESURFACER

Acme Asbestos Covering & Flooring Co 246 N Elizabeth Chgo 7 Ill
American Fluresit Co Inc 4011 Red Bank Rd Cincinnati 27 Ohio
Anti-Hydro Waterproofing Co 245 Badger Av Newark 8 N J

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Philip Carey Mfg Co Dept AL-4 Cincinnati 15 Ohio
Ceresit Waterproofing Corp 3227 So Shields Chgo Ill
Evercrete Corp 424 W 42nd St New York N Y
Haynes Prods Co 4007 Farnam St Omaha 3 Nebr
Smooth-On Mfg Co 572 Communipaw Av Jersey City 4 N J
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Steelcote Mfg Co 3418 Gratiot St St Louis 3 Mo
Toch Bros Inc 2600 Richmond Terr Staten Island 3 N Y

FLOOR SEALER

Abesto Mfg Co Michigan City Ind
Adelphi Paint & Color Wks Inc 86-00 Dumont Av Ozone Pk 17 N Y
American Floor Surfacing Machine Co 521 So St Clair St Toledo 3 Ohio
American Varnish Co 1138 N North Branch St Chicago 22 Ill
E L Bruce Co Box 397 Memphis Tenn
Bruning Bros Inc 4209 E Chase St Baltimore 6 Md
Camp Chemical Co Inc 2nd Av & 18th St Brooklyn 19 N Y
Ceresit Waterproofing Corp 3227 So Shields Chgo Ill (concrete)
Chi-Namel Paint & Varnish Co 1101 3rd St So Minneapolis 15 Minn
Clarke Sanding Machine Co 464 Clay St Muskegon Mich
Devoe & Raynolds Co Inc 787 First Av New York 17 N Y
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Franklin Research Co 5134 Lancaster Av Philadelphia 31 Pa
Glidden Co Cleveland 2 Ohio
The Hilger Co St Cloud Minn
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
International Chemical Co 3140 S Canal St Chicago 16 Ill
Lowe Bros Co 424 E 3rd St Dayton 2 Ohio
Minnesota Mining & Mfg Co St Paul 6 Minn
Minnesota Paints Inc Minneapolis Minn
Minnesota Platon Corp Pipestone Minn
The Patterson-Sargent Co 1325 E 38th St Cleveland 14 Ohio
Peaslee-Gaulbert Paint & Varnish Co 223 N 15th St Louisville Ky
Sapolin Paints Inc 229 E 42nd St New York 17 N Y
Seidlitz Paint & Varnish Co 18th & Garfield Sts Kansas City Mo
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Tamms Industries Inc 228 N La Salle Chicago 1 Ill
Toch Bros Inc 2600 Richmond Terr Staten Island 3 N Y
Waterlox Div Empire Varnish Co 2636 E 76th St Cleveland 4 Ohio

FLOORING—hardwood and softwood (see lumber classification beginning Page 696

FLOORING—composition

Acorn Refining Co 8001 Franklin Blvd Cleveland Ohio
Philip Carey Mfg Co Cincinnati 15 Ohio
Flintkote Co 30 Rockefeller Plaza New York N Y
Kentile Prods Inc 475 Brannan St San Francisco 19 Calif
Roc-Wood Flooring 2268 South Parkway Chicago 16 Ill
Tile-tex Div Flintkote Co 1232 McKinley St Chicago Heights Ill
20th Century Paint & Varnish Corp 456 Driggs Av Brooklyn 11 N Y
Williams Prods Co Inc 6127-37 Cedar Av Philadelphia 43 Pa

FLUE LINING

Acme Brick Co Ft Worth 2 Tex
Cannelton Sewer Pipe Co Inc Cannelton Ind
Chicago Fire Brick Co 1461 N Elston Chgo Ill
Clay City Pipe Co Uhrichsville Ohio
Dee Clay Products Co Inc Bloomingdale Ind
Denver Sewer Pipe & Clay Co Denver 1 Colo
W S Dickey Clay Mfg Co 922 Walnut St Kansas City 6 Mo
Evans Pipe Co Uhrichsville O
Lehigh Sewer Pipe & Tile Co Fort Dodge Ia
Owensboro Sewer Pipe Co Inc Owensboro Ky
Pacific Clay Products 306 W Ave 26 Los Angeles 31 Cal
Robinson Clay Prod Co Akron O
Stillwater Clay Prdoucts Co 3334 Prospect Av Cleveland 15 Ohio
Streator Drain Tile Co Streator Ill
Universal Sewer Pipe Co Cleveland O
Washington Brick & Lime Co Box 2198 Spokane 6 Wash
What Cheer Clay Prod Co What Cheer Ia
Williams-Wallace Co 160 Hooper St San Francisco 7 Cal

FLUE RINGS

Acme Brick Co Ft Worth 2 Tex
Adams Co Dubuque Ia
Cannelton Sewer Pipe Co Inc Cannelton Ind
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Clay City Pipe Co Lock Drawer 272 Uhrichsville O
Columbia Pipe Co Columbia S C
Dee Clay Products Inc Bloomingdale Ind
W S Dickey Clay Mfg Co 922 Walnut St Kansas City 6 Mo
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Evans Pipe Co Uhrichsville Ohio
F D Kees Mfg Co Beatrice Nebr
Lehigh Sewer Pipe & Tile Co Ft Dodge Ia
Owensboro Sewer Pipe Co Inc Owensboro Ky
Sterling Foundry Co Inc Sterling Ill
Stillwater Clay Prods Co 3334 Prospect Av Cleveland 15 Ohio
Streator Drain Tile Co Streator Ill
A L Swett Iron Wks Medina N Y
Wheeling Corrugating Co Wheeling W Va

FORESTERS—consulting

Associates Inc PO Box 5254 New Orleans La
Thos F Grayson Prescott 5 Ark
James W Sewall Co Old Town Maine
H M Spain & Co Commerce Title Bldg Memphis Tenn

FREEZERS—home & farm

Admiral Corp 3800 W Cortland Chgo 47 Ill
Deepfreeze Div Motor Products Corp North Chicago Ill
Frigidaire Div General Motors Corp Dayton 1 Ohio
General Electric Co Schenectady 5 N Y
General Refrigerator Corp 678 Broadway N Y 12 N Y
Gibson Refrigerator Co Greenville Mich
Kelvinator Div Nash-Kelvinator Corp 14250 Plymouth Rd Detroit 32 Mich
Norge Div Borg-Warner Corp 672 Woodbridge St Detroit 26 Mich
Seeger-Sunbeam Corp St Paul 6 Minn
Sub-Zero Freezer Co Rice Lake Wis
Warren Co Inc 905 Memorial Dr S E Atlanta 1 Ga
Westinghouse Electric Corp Mansfield O
Winpower Mfg Co Newton Iowa

FURNACE PIPE & FITTINGS

Badger Corrugating Co La Crosse Wis
Cincinnati Sheet Metal & Roofing Co Cincinnati 2 O
Inland Steel Products Co (formerly Milcor Steel Co) 4027 W Burnham St Milwaukee 1 Wis
Jettronaire Inc 2417 Walnut St McKeesport Penna
Krauser-Boyd Inc 553 River Rd North Tonawanda N Y
LaCrosse Steel Roofing & Corrugating Co LaCrosse Wis
Majestic Co 303-C Erie St Huntington
Northwest Metal Products Inc 55 Spokane St Seattle 4 Wash
Penn Supply & Metal Corp 1831 N 5th St Philadelphia 22 Pa
Reeves Steel & Mfg Co Dover O
U S Register Co Battle Creek Mich
Waterman-Waterbury Co 421 Jackson St N E Minneapolis 13 Minn
Wheeling Corrugating Co Wheeling W Va
Williams-Wallace Co 160 Hooper St San Francisco 7 Cal

FURNACES—coal

American Radiator & Standard Sanitary Corp Pittsburgh 22 Pa
Chrysler Corp Airtemp Div Dayton 1 Ohio
Excelsior Stove & Mfg Co Quincy Ill
Front Rank Mfg Co 2500 Ohio Av St Louis 4 Mo
Ingersoll Steel Div of Borg-Warner Corp 310 S Michigan Av Chicago 4 Ill
Iron Fireman Co 3170 W 106th St Cleveland 11 Ohio
Locke Stove Co 114 W 11th St Kansas City 6 Mo
Majestic Co 303-C Erie St Huntington Ind
L J Mueller Furnace Co Milwaukee Wis
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Steel Products Engineering Co 1205 W Columbia St Springfield O
Wayne Home Equipment Co 801 Glasgow Av Ft Wayne Ind
Wheeling Furnace Corp Martins Ferry O

FURNACES—floor

American Radiator & Standard Sanitary Corp Pittsburgh 22 Pa
Bryant Heater Co 17825 St Clair Av Cleveland 10 Ohio
The Coleman Co Inc Wichita 1 Kan
Norge Heat Div Borg-Warner Corp 672 E Woodbridge St Detroit 26 Mich
Northwest Metal Products Inc 55 Spokane St Seattle 4 Wash
Oran Co 2222 S 3rd St Columbus 7 O
Perfection Stove Co 7609 Platt Av Cleveland O
Pioneer Co Century Bldg Pittsburgh 22 Pa
Queen Stove Wks Albert Lea Minn
Round Oak Co Dowagiac Mich
Temco Inc 4104 Park Av Nashville 9 Tenn
Wayne Home Equipment Co 801 Glasgow Av Ft Wayne Ind

FURNACES—gas fired

American Radiator & Standard Sanitary Corp Pittsburgh 22 Pa
Bryant Heater Co 17825 St Clair Av Cleveland 10 Ohio
Century Engineering Corp Cedar Rapids Ia
Chrysler Corp Airtemp Div Dayton 1 Ohio
The Coleman Co Inc Wichita 1 Kan
Delco Appl Div Gen Motors Corp 391 Lyell Av Rochester 1 N Y
Excelsior Stove & Mfg Co Quincy Ill
Front Rank Mfg Co 2500 Ohio Av St Louis 4 Mo
General Electric Co Schenectady 5 N Y
The Heil Co 3000 W Montana St Milwaukee 1 Wis
Jettronaire Inc 2417 Walnut St McKeesport Penna
Majestic Co 303-C Erie St Huntington Ind
Morrison Steel Products Inc 683 Amherst St Buffalo 7 N Y
L J Mueller Furnace Co Milwaukee Wis
Norge Heat Div Borg-Warner Corp 672 E Woodbridge St Detroit 26 Mich
Payne Furnace & Supply Co Beverly Hills Cal
Perfection Stove Co 7609 Platt Av Cleveland O
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Surface Combustion Corp Toledo 1 Ohio
Steel Prods Engineering Co 1205 W Columbia St Springfield O
Waterman-Waterbury Co 1121 Jackson St N E Minneapolis 18 Minn
Wayne Home Equipment Co 801 Glasgow Av Ft Wayne Ind
The Williamson Heater Co Cincinnati 9 Ohio

FURNACES—oil fired

Aeroil Burner Co Inc Park Av & 57th West New York N J
Century Engineering Corp Cedar Rapids Ia
Delco Appl Div Gen Motors Corp 391 Lyell Av Rochester 1 Minn
Fluid Heat Div Anchor Post Products Inc 6500 Eastern Av Baltimore 24 Md
General Electric Co 1 River Rd Schenectady 5 N Y
Hart Oil Burner Co Peoria Ill
The Heil Co 3000 W Montana St Milwaukee 1 Wis
Jettronaire Inc 2417 Walnut St McKeesport Penna
H C Little Burner Co 2nd & Lincoln Sts San Rafael Cal
Majestic Co 303-C Erie St Huntington Ind
Morrison Steel Products Inc 683 Amherst St Buffalo 7 N Y
L J Mueller Furnace Co Milwaukee Wis
Norge Heat Div Borg-Warner Corp 672 E Woodbridge St Detroit 26 Mich
Perfection Stove Co 7609 Platt Av Cleveland 4 Ohio
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Silent Sioux Oil Burner Corp Orange City Ia
Steel Prods Engineering Co 1205 W Columbia St Springfield O
Waterman-Waterbury Co 1121 Jackson St N E Minneapolis 13 Minn
Wayne Home Equipment Co 801 Glasgow Av Ft Wayne Ind
York-Shipley Inc York Pa

FURNACES—plumbers' & tinners'

Aeroil Burner Co Inc Park Av & 57th West New York N J

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Otto Bernz Co Inc 280 Lyell Av Rochester 6 N Y
Cedarberg Mfg Co 545 S 4th St Minneapolis 15 Minn
Hauck Mfg Co 126 10th St Brooklyn 15 N Y
J D Polis Mfg Co 3437 W Ogden Av Chicago 23 Ill

FURNITURE—unfinished

Anchor Sales Corp 874 Fifth Av Brooklyn 32 N Y
Wm P Curtiss & Son Richland N Y
General Wood Works Council Bluffs Ia
Indiana Willow Products Co Inc Martinsville Ind (rustic)
The Walter S Kraus Co 48-02 43rd St Woodside N Y
Lincraft Inc Burlington N J (rustic)
Long-Bell Lbr Co PO Box 1079 Longview Wash & R A Long Bldg Kansas City Mo
Machin Venetian Blind Co Momence Ill
Nashotah Moulding & Mfg Co Nashotah Wis
Raber Mfg Corp 700 Third Av Brooklyn 32 N Y
Salmanson & Co Inc 1107 Broadway New York 10 N Y
E A Vandy 14105 Merchandise Mart Chicago 54 Ill
Watertown Table Slide Corp Watertown Wis
Western Pine Mfg Co Ltd P O Box 2207 Spokane 7 Wash

FUSE BOXES

Cole Elec Prod Co 43-06 Crescent Long Island City N Y
Electrical Engineers Equip Co Melrose Park Ill
F D Kees Mfg Co Box 8 Beatrice Neb
Leonard Elec Mfg Co Cleveland O
Wm Wurdack Elec Mfg Co St Louis Mo

FUSES

Bussman Mfg Co University at Jefferson St Louis 7 Mo
Chase-Shawmut Co Newburyport Mass
Eagle Electric Mfg Co Inc 23-10 Bridge Plaza So Long Island City 1 N Y
Economy Fuse & Mfg Co 2717 N Greenview Chgo Ill
General Electric Co Schenectady 5 N Y
Jefferson Elec Co Bellwood Ill
Kirkman Engineering Corp 123 Mercer St New York 12 N Y
Metropolitan Elec Mfg Co 2250 Steinway Long Island City 5 N Y
Royal Elec Co Inc Pawtucket R I
Star Fuse Co Inc 235 Canal NY NY
Trico Fuse Mfg Co 2948 N 5th St Milwaukee 12 Wis

GARAGE DOOR OPERATORS—automatic

Autosonic Sales Div Vendo Co 7400 E 12th St Kansas City Mo
Barber-Colman Co Rockford Ill
Calder Mfg Co Inc 630 N Prince St Lancaster 4 Pa
Capitol Products PO Box 1240 Springfield Ill
Federal Industries Inc 19720 W Eight Mile Rd Detroit 19 Mich
Frantz Mfg Co Sterling Ill
Horton Mfg Div The Aviation Corp Cleveville O
Howell Mfg Co Cottman St & Hasbrook Av Philadelphia 11 Pa
Kinnear Mfg Co 1191 Fields Av Columbus O
Raynor Mfg Co Dixon Ill
Richards-Wilcox Mfg Co Aurora Ill
Sterling Electronic Door Control Corp Sterling Ill
United Products Co 900 N 43rd St Milwaukee 14 Wis
Wagner Mfg Co Dept ALG-52 Cedar Falls Iowa
J G Wilson Corp 370 Lexington Av New York 17 N Y

GARBAGE RECEPTACLES

Cupples Co 401 S 7th St St Louis 2 Mo
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Walter S Kraus Co 48-02 43rd St Woodside L I N Y
Majestic Co 303-C Erie St Huntington Ind
Northwest Metal Products Inc Seattle 4 Wash
Reeves Steel & Mfg Co Dover Ohio
Sanitary Receiver Co Dunkirk N Y
Sexton Can Co Everett Mass
Wheeling Corrugating Co Wheeling W Va

GATES—farm

Alprodco Inc Kempton Ind
American Steel & Wire Co U S Steel Corp Sub Rockefeller Bldg Cleveland 13 Ohio
Ceco Steel Products Corp 5601 W 26th St Chicago 50 Ill
Clay Equipment Corp Cedar Falls Ia
Coburn Mfg Co Whitewater Wis
Colorado Fuel & Iron Corp Denver 1 Colo
Columbia Steel Co Russ Bldg San Francisco Cal
Continental Steel Corp Kokomo Ind
Cyclone Fence Div American Steel & Wire Co U S Steel Corp Sub P O Box 260 Waukegan 1 Ill
Dare Products Inc Dept A L PO Box 157 Battle Creek Mich (electric)
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Franklin Equipment Co Monticello Ia
Hicks Gate Co Fredericktown O
James Mfg Co Fort Atkinson Wisc
Keystone Steel & Wire Co Peoria Ill
Mid-States Steel & Wire Co Crawfordsville Ind
Nichols Wire & Aluminum Co Davenport Iowa
Northwestern Steel & Wire Co Sterling Ill
Pittsburgh Steel Co Pittsburgh Pa
Rowe Mfg Co Dept AL Galesburg Ill
Standard Mfg Co Cedar Falls Ia
Tennessee Coal Iron & RR Co U S Steel Corp Sub Birmingham Ala

GATES—industrial & residential

Alprodco Inc Kempton Ind
American Chain Link Fence Co Medford Mass
Anchor Post Fence Div Anchor Post Products Inc 6500 Eastern Av Baltimore 24 Md
Columbia Steel Co Russ Bldg San Francisco 6 Cal
Continental Steel Corp Kokomo Ind
Cyclone Fence Div American Steel & Wire Co U S Steel Corp Sub P O Box 260 Waukegan 1 Ill
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Illinois Wire & Mfg Co P O Box A-1396 Joliet Ill
Keystone Steel & Wire Co Peoria Ill
Metal Crafters 1756 E Av NE Cedar Rapids Iowa
Northwestern Steel & Wire Co Sterling Ill
Pittsburgh Steel Co Pittsburgh Pa
Redwood Garden Materials Co Los Angeles 21 Calif
Stewart Iron Wks Co Inc 1951 Stewart Block Cincinnati O
Tennessee Coal Iron & RR Co U S Steel Corp Sub Birmingham Ala

GAUGES

Semon Bache & Co 636 Greenwich St NY 14 NY
Jas P Marsh Corp 3501 Howard St Skokie Ill
Millers Falls Co Greenfield Mass (butt)
L S Starrett Co Athol Mass
The Tannewitz Wks Grand Rapids 4 Mich
Union Tool Co Orange Mass

GENERATING SETS—steam, electric, gasoline

Allis-Chalmers Mfg Co Milwaukee Wis
Buda Co Harvey Ill (diesel)
Construction Machinery Co Waterloo Iowa
Fairbanks Morse & Co 600 S Michigan Chgo Ill
Homelite Corp Port Chester N Y (gasoline)
Kohler Co Kohler Wis (elec only)
Mall Tool Co 7733 S Chicago Av Chicago 19 Ill
The Ready-Power Co 3820 Grand River Av Detroit Mich (electric)
Universal Motor Co Oshkosh Wis (gasoline)
Westinghouse Electric Corp 306 Fourth Av Dept G10093-A Pittsburgh 30 Pa

GLASS—ornamental

Alsynite Co of America 4654 De Soto St San Diego 9 Cal
Semon Bache & Co 636 Greenwich New York 14 N Y
Dearborn Glass Co Dept RB 2402 W 21st St Chicago 8 Ill
The Hagemann Companies Inc 2145 Central Pkwy Cincinnati 14 Ohio
Libbey-Owens-Ford Glass Co 1642 Nicholas Bldg Toledo O
The Nurre Cos Inc Bloomington Ind
Pennsylvania Wire Glass Co Philadelphia 3 Pa
Pittsburgh Plate Glass Co 2126 Grant Bldg Pittsburgh 19 Pa
Royal Glass Works Corp 50-20 25th Long Island City 1 N Y
Safetee Glass Co Philadelphia 44 Pa (luminated)
Shower Door Co of America 973 Peachtree St N E Atlanta 5 Ga
U S Glass Co Tiffin Ohio

GLASS—plate

Semon Bache & Co 636 Greenwich New York 14 N Y
The Hagemann Companies Inc 2145 Central Pkwy Cincinnati 14 Ohio
Libbey-Owens-Ford Glass Co 1642 Nicholas Bldg Toledo 3 Ohio
Mississippi Glass Co 200 5th Av NY NY
The Nurre Cos Inc Bloomington Ind
Pittsburgh Plate Glass Co 2126 Grant Bldg Pittsburgh 19 Pa
Royal Glass Works Corp 50-20 25th Long Island City 1 N Y
Safetee Glass Co Philadelphia 44 Pa (luminated)

GLASS—structural

Alsynite Co of American 4654 De Soto St San Diego 9 Cal
Semon Bache & Co 636 Greenwich New York 14 N Y
Conroy-Prugh Glass Co Pittsburgh Pa
The Hagemann Companies Inc 2145 Central Pkwy Cincinnati 14 Ohio
Libbey-Owens-Ford Glass Co 1642 Nicholas Bldg Toledo 3 Ohio
Mississippi Glass Co 88 Angelica St St Louis 7 Mo
The Nurre Cos Inc Bloomington Ind
Pennsylvania Wire Glass Co Philadelphia 3 Pa
Pittsburgh Plate Glass Co 2126 Grant Bldg Pittsburgh 19 Pa
Resolite Corporation Zelienople Penna (plastic)
Royal Glass Wks Corp 50-20 25th St Long Island City N Y

GLASS—window

American Window Glass Co Farmers Bank Bldg Pittsburgh Pa
Semon Bache & Co 636 Greenwich NY 14 N Y
Conroy-Prugh Glass Co Pittsburgh Pa
Fourco Glass Co Clarksburg W Va
The Hagemann Companies Inc 2145 Central Pkwy Cincinnati 14 Ohio
Libbey-Owens-Ford Glass Co 1642 Nicholas Bldg Toledo 3 Ohio
The Nurre Cos Inc Bloomington Ind
Pittsburgh Plate Glass Co 2126 Grant Bldg Pittsburgh 19 Pa
Royal Glass Wks Corp 50-20 25th St Long Island City 1 N Y

GLASS—window, wire

Semon Bache & Co 636 Greenwich New York 14 N Y
Dearborn Glass Co 2402 W 21st St Chicago 8 Ill
The Hagemann Companies Inc 2145 Central Pkwy Cincinnati 14 Ohio
Libbey-Owens-Ford Glass Co 1642 Nicholas Bldg Toledo 3 Ohio
Pennsylvania Wire Glass Co Philadelphia Pa
Pittsburgh Plate Glass Co 2126 Grant Bldg Pittsburgh 19 Pa
Royal Glass Works Corp 50-20 25th Long Island City 1 N Y

GLASS BLOCK

American Structural Products Co Daylight Engineering Lab Dept AL-4 Box 1035 Toledo 1 Ohio
The Hagemann Companies Inc 2145 Central Pkwy Cincinnati 14 Ohio
Pittsburgh Corning Corp Dept FF-4 307 4th Av Pittsburgh 22 Pa
Pittsburgh Plate Glass Co 2126 Grant Bldg Pittsburgh 19 Pa
Royal Glass Works Corp 50-20 25th St Long Island City N Y

GLASS CUTTING BOARDS

Wm L Barrett Co 34 School St Bristol Conn
The Fletcher Terry Co 592 South St Forestville Conn
Glaziers' Tool Mfg Co 611 W Adams Chgo 6 Ill
Lufkin Rule Co Saginaw Mich
Marvel Rack Mfg Co 24-1st St NE Minneapolis Minn
Red Devil Tools Irvington 11 N J
Sommer & Maca Glass Machinery Co 300 S Oakley Av Chicago 9 Ill

GLASS CUTTERS

Wm L Barrett Co 34 School St Bristol Conn
Black Panther Tool Co 401 N Broad St Philadelphia 8 Penna
The Fletcher Terry Co 592 South St Forestville Conn
Glaziers' Tool Mfg Corp 611 W Adams Chgo Ill
W C Heller & Co Cat #40A 1050 Bryant St Montpelier Ohio
Marvel Rack Mfg Co 21 1st St N Minneapolis Minn

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Millers Falls Co Greenfield Mass
Red Devil Tools Irvington 11 N J
Royal Glass Works Corp 50-20 25th St Long Island City N Y

GLAZING COMPOUND

The Armstrong Co 4065 S LaSalle Chicago 9 Ill
Robert N Baltz & Co 1009 Harvard Terrace Evanston 6 Ill
Biddle Co 612 S Main St St Louis 2 Mo
Briggs Maroney Co Inc Everett 49 Mass
Devoe & Raynolds Co Inc 787 First Av New York 17 N Y
Dicks Pontius Co Dayton Ohio
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Fort Pitt Chem Co 26th & Smallman St Pittsburgh 22 Pa
The Gibson-Homans Co 2367 Woodhill Rd Cleveland Ohio
A C Horn Co Inc 10th St & 44th Av Long Island City 1 NY
Landen Putty Works Malden 49 Mass
Macklanburg-Duncan Co Oklahoma City 1 Okla
W S McGuffie & Co 3400 Theurer Ct Cleveland 9 Ohio
Ira Parker & Sons Co Oshkosh Wis
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Pittsburgh Plate Glass Co 2126 Grant Bldg Pittsburgh 19 Pa
Plastic Products Co 6467 Georgia Av Detroit 11 Mich
Plastoid Products Co 518 City Park Av New Orleans 19 La
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
The Tremco Mfg Co Cleveland 4 Ohio
United Gilsonite Laboratories Scranton 1 Pa

GLAZING—transparent plastic

Arvey Corp 3462 N Kimball Av Chicago Ill
Peerless Mfg Co 2100 N 11th St Reading Pa
Resolite Corporation Zellenople Penna
Richkraft Co 228 N LaSalle St Chicago 1 Ill
Rohm & Haas Co Washington Square Philadelphia 5 Pa
Sol-O-Lite Mfg Co 4301 W North Av Chicago 30 Ill
Warp Bros 1100 N Cicero Av Chicago 51 Ill

GLOVES—industrial

Broadway Rubber Mfg Co 529 E Broadway Louisville 2 Ky
Cupples Co 401 S 7th St St Louis 2 Mo
Elin Manufacturing Co Rochester Ind
The B F Goodrich Co Akron Ohio
Industrial Glove Co 300 Garfield St Danville Ill
Olympic Glove Co 97 Madison Av NY NY
Peerless Glove Co Grand Haven Mich
Pioneer Rubber Co Willard O
Seiberling Latex Prod Co Barberton O

GLUE—animal

Armour & Co 1355 W 31st St Chgo 9 Ill
Consumers Glue Co St Louis Mo
Franklin Glue Co Columbus 15 Ohio
H B Fuller Co 255 Eagle St St Paul 2 Minn
Keystone Tanning & Glue Co Inc Keystone Glue Div Drawer 330 Williamsport 53 Pa
Le Page's Inc Gloucester Mass
Madison Glue Corp 53 Park Place New York 7 N Y
Monite Waterproof Glue Co Minneapolis Minn
National Adhesives Div National Starch Prods Inc 270 Madison Av New York 16 N Y
Paisley Products Inc 1770 Canalport Av Chgo 16 Ill
Perkins Glue Co Lansdale Pa
Standard Paste & Glue Co 3620 W 38th St Chicago Ill
Webb Products Co 242 S G St San Bernardino Cal

GLUE—casein

Aetna Plywood & Veneer Co 1732 Elston Av Chicago 22 Ill
The Borden Co Chemical Div 350 Madison Av N Y 17 N Y
Consumers Glue Co St Louis 6 Mo
Davis Plywood Corp 12555 Berea Rd Cleveland 11 Ohio
Franklin Glue Co (Bondwood) Columbus 15 Ohio
Hayes Adhesives Co St Louis 15 Mo
Lacton Glue Mfg Co 611 Broadway NY 12 NY
Le Page's Inc Gloucester Mass
Monite Waterproof Glue Co 1628 Second St North Minneapolis 11 Minn
Monsanto Chemical Co Western Div 911 Western Av Seattle 4 Wash
National Adhesives Div National Starch Prods Inc 270 Madison Av New York 16 N Y
National Casein Sales 601 W 80th Chgo 20 Ill
Paisley Products Inc 1770 Canalport Av Chicago 16 Ill
Perkins Glue Co Lansdale Pa
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill

GLUE—cold water

Aetna Plywood & Veneer Co 1732 Elston Av Chicago 22 Ill
The Borden Co Chemical Div 350 Madison Av N Y 17 N Y
Consumers Glue Co St Louis 6 Mo
Crescent Products Co 315 N 14th St Terre Haute Ind
Franklin Glue Co (Bondwood) Columbus 15 Ohio
H B Fuller Co 255 Eagle St St Paul 2 Minn
C B Hewitt & Bros Inc 23 Greene N Y 13 N Y
Lacton Glue Mfg Co 611 Broadway NY 12 NY
Le Page's Inc Gloucester Mass
The Mengel Co Inc Louisville 1 Ky
Monite Waterproof Glue Co 1628 2nd St North Minneapolis 11 Minn
National Casein Sales 601 W 80th Chgo 20 Ill
Paisley Products Inc 1770 Canalport Av Chicago 16 Ill
Perkins Glue Co Lansdale Pa
Roddis Plywood Corp Marshfield Wis
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill
L M Thornton Mfg Co Inc 2825 E 18th St Kansas City 1 Mo
U S Mengel Plywoods Inc Box 1612 Louisville 1 Ky
United States Plywood Corp Dept 615 55 W 44th St N Y 18 N Y

GLUE—fish

The Commercial Paste Co Buttles at Michigan Columbus 8 Ohio
Consumers Glue Co St Louis 6 Mo
H B Fuller Co 255 Eagle St St Paul 2 Minn
C B Hewitt & Bros Inc 23 Greene N Y 13 N Y
Lacton Glue Mfg Co 611 Broadway New York 12 N Y
Le Page's Inc Gloucester Mass
Paisley Products Inc 1770 Canalport Chgo 16 Ill
Standard Paste & Glue Co Inc 3620 W 38th Chicago Ill
L M Thornton Mfg Co 2825 E 18th St Kansas City Mo

GLUE—resin

Aetna Plywood & Veneer Co 1732 Elston Av Chicago 22 Ill
American Cyanamid Co 30 Rockefeller Plaza New York 20 N Y
The Borden Co Chemical Div 350 Madison Av N Y 17 N Y
Catalin Corp of America 1 Park Av N Y 16 N Y
Davis Plywood Corp 12555 Berea Rd Cleveland 11 Ohio
Fiddes-Moore & Co 4950 State Line Av Hammond Ind
Franklin Glue Co (Evertite) Columbus 15 Ohio
H B Fuller Co 255 Eagle St St Paul 2 Minn
Hayes Adhesives Co St Louis 15 Mo
Lacton Glue Mfg Co 611 Broadway New York N Y
Le Page's Inc Gloucester Mass
The Mengel Co Inc Louisville Ky
Milwaukee Plywood Co 1227 W Bruce St Milwaukee 4 Wis
Monite Waterproof Glue Co 1628 2nd St N Minneapolis 11 Minn
Monsanto Chemical Co Western Div 911 Western Av Seattle 4 Wash
Natl Adhesives Div Natl Starch Prods Inc 270 Madison Av New York 16 N Y
National Casein Sales 601 W 80th Chgo 20 Ill
Paisley Products Inc 1770 Canalport Av Chicago 16 Ill
Perkins Glue Co Lansdale Pa
Resinous Prod & Chem Co Inc Philadelphia Pa
Roddis Plywood Corp Marshfield Wis
Standard Paste & Glue Co Inc 3620 W 38th St Chicago Ill
Technical Supply Co 1911 University Av Palo Alto Calif
U S Mengel Plywoods Inc Box 1612 Louisville 1 Ky
United States Plywood Corp Industrial Adhesives Div 55 W 44th St New York 18 N Y

GLUE—waterproof

Aetna Plywood & Veneer Co 1732 Elston Av Chicago 22 Ill
American Cyanamid Co 30 Rockefeller Plaza New York 20 N Y
Armour & Co 1355 W 31st St Chicago 9 Ill
The Borden Co Chemical Div 350 Madison Av N Y 17 N Y
Consumers Glue Co St Louis 6 Mo
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Franklin Glue Co Columbus 15 Ohio
H B Fuller Co 255 Eagle St St Paul 2 Minn
Le Page's Inc Gloucester Mass
The Mengel Co Inc Louisville 1 Ky
Minnesota Mining & Mfg Co St Paul 6 Minn
Miracle Adhesives Corp Dept AL4-8 214 E 53rd St NY 22 NY
Monite Waterproof Glue Co 1628 2nd St N Minneapolis 11 Minn
Monsanto Chemical Co Western Div 911 Western Av Seattle 4 Wash
National Casein Sales 601 W 80th Chgo 20 Ill
Paisley Products Inc 1770 Canalport Av Chicago 16 Ill
Perkins Glue Co Lansdale Pa
Resinous Prod & Chem Co Inc Philadelphia Pa
Rohm & Haas Co Washington Sq Philadelphia 5 Pa
Roddis Plywood Corp Marshfield Wis
Standard Paste & Glue Co Inc 3620 W 38th St Chicago Ill
Technical Supply Co 1911 University Av Palo Alto Cal
U S Mengel Plywoods Inc Box 1612 Louisville 1 Ky
United States Plywood Corp Industrial Adhesives Div 55 W 44th St New York 18 N Y

GLUE POTS

Black Bros Co Inc Mendota Ill
Black & Decker Mfg Co Dept H-640 Towson 4 Md
Chas E Francis Co Rushville Ind
Oliver Machy Co Grand Rapids Mich
Sta-Warm Electric Co Ravenna O
Vulcan Elec Co 88 Holten St Danvers Mass (electric)

GLUE SPREADERS

Nels J Billstrom Inc 1844 18th Av Rockford Ill
Black Bros Co Inc Mendota Ill
Standard Paste & Glue Co Inc 3620 W 38th St Chgo Ill

GRATES—area

Artcraft Ornamental Iron Co 724 E Hudson Columbus O
Cincinnati Iron Fence Co Inc 2110 Florence Av Cincinnati 6 O
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Harris Inc 200 E Long St Columbus 15 Ohio
Majestic Co 303-C Erie St Huntington Ind
St Paul Corrugating Co St Paul 1 Minn
Wm J Samcoe Iron Co 917 Military Rd Kenmore 17 N Y
F P Smith Wire & Iron Wks 2340 Clybourn Av Chicago 14 Ill
Superior Fireplace Co 1708 East 15th St Dept AL 512 Los Angeles Cal and 601 North Point Road Dept AL 512 Baltimore 6 Md

GRATES

Adams Co Dubuque Ia
Chattanooga Implement & Mfg Co Chattanooga Tenn
D J Murray Mfg Co Wausau Wis
St Paul Corrugating Co St Paul 1 Minn
Western Foundry Co 2400 SW Water St Portland 1 Ore

GRILLES—metal

Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Cincinnati Iron Fence Co Inc 2110 Florence Av Cincinnati 6 Ohio
Colorado Fuel & Iron Corp Wickwire Spencer Steel Div 500 Fifth Av New York 18 N Y
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Harris Inc 200 E Long St Columbus 15 Ohio
Industrial Iron Wks PO Box 4625 Portland 2 Ore
Kentucky Metal Products Co Preston St & Aubudon Pk Louisville 4 Ky
Logan Co Inc Louisville 6 Ky (iron and steel)

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Macklanburg-Duncan Co Oklahoma City 1 Okla
Majestic Co 102-D Erie St Huntington Ind
Newman Bros Inc Dept A-L 660 W 4th St Cincinnati 3 Ohio (bronze, aluminum, stainless steel)
Wm J Samcoe Iron Co 917 Military Rd Kenmore 17 N Y
F P Smith Wire & Iron Wks 2340 Clybourn Av Chicago 14 Ill
Sommer Metalcraft Corp Crawfordsville Ind
Southern Wire & Iron Wks 441 Memorial Dr S E Atlanta Ga
Stewart Iron Wks Co Inc 1951 Stewart Block Cincinnati O
Western Foundry Co 2400 SW Water St Portland 1 Ore

GRILLES—outdoor cooking

Bennett-Ireland Inc 449 Pine St Norwich N Y
Colgate Mfg Corp 152 S 15th St Lindenhurst LI N Y
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Majestic Co 303-C Erie St Huntington Ind
Western Foundry Co 2400 SW Water St Portland 1 Ore

GRILLES—radiator

J G Braun Co 615 S Paulina St Chicago 12 Ill
Garden City Plating & Mfg Co 1750 N Ashland Chicago 22 Ill
Salmanson & Co Inc 1107 Broadway New York 10 N Y
Gichner Inc 1900 Kendall St NE Washington 2 D C
United States Register Co 344 E Burnham St Battle Creek Mich

GRILLES—screen door

Artcraft Ornamental Iron Co 724 E Hudson Columbus O
R G Coffman Co Inc 2809 N Orange Av Orlando Fla
Decatur Iron & Steel Co PO Box 72 Decatur Ala
W J Dennis & Co 4444 W Irving Park Chicago Ill
Harvard Metal Products Inc 97-99 Reading St Roxbury 19 Mass
Hawkins Iron Co Inc 315 N Fourth St Birmingham 4 Ala
Huntington Industries 2368 Prospect St Memphis Tenn
Kentucky Metal Products Co Preston St & Aubudon Pk Louisville 4 Ky
Macklanburg-Duncan Co Oklahoma City 1 Okla
National Guard Products Inc 540 Jackson Ave PO Box 1520 Memphis 1 Tenn
Wm J Samcoe Iron Co 917 Military Rd Kenmore 17 N Y
Southern Wire & Iron Wks 441 Memorial Dr S E Atlanta Ga

GRINDERS—band wheel

Bridgeport Safety Emery Wheel Co Inc 550 Main St Stratford Conn
Hanchett Mfg Co Big Rapids Mich
Heston & Anderson Div St Paul Foundry & Mfg Co Box 431 Fairfield Ia
Prescott Co Menominee Mich

GRINDERS—bench & floor

Black & Decker Mfg Co Dept H-640 Towson 4 Md
Bradford Machine Tool Co 670 Evans St Cincinnati Ohio
Bridgeport Safety Emery Wheel Co Inc 550 Main St Stratford Conn
Chase Turbine Mfg Co Orange Mass
Cincinnati Electrical Tool Co Cincinnati Ohio
Delta Power Tool Div Rockwell Mfg Co 693-D E Vienna Av Milwaukee Wis
Diehl Mfg Co 1124 Finderne Av Somerville N J
Hanchett Mfg Co Big Rapids Mich
Luther Grinder & Tool Co Sheboygan Wis (bench only)
Mall Tool Co 7733 South Chicago Av Chicago 19 Ill
Millers Falls Co Greenfield Mass
Milwaukee Electric Tool Corp 5364 W State St Milwaukee 8 Wis
Porter-Cable Machine Co 1714 N Salina St Syracuse 8 N Y (bench only)
Skilsaw Inc 5033 Elston Av Chicago 30 Ill
The Standard Electrical Tool Co Cincinnati 4 Ohio
Stanley Works New Britain Conn
U S Electrical Tool Co Cincinnati 14 O
Walker-Turner Div Kearney & Trecker Corp Plainfield N J

GRINDERS—cutter head

Chase Turbine Mfg Co Orange Mass
C K L Machinery Co 160 Harrison St Oshkosh Wis
Dependable Machine Co Inc Greensboro N C
Samuel J Shimer & Sons Inc 10 Race St Milton Pa
Stetson-Ross Mach Co Seattle 4 Wash
S A Woods Machine Co Boston 27 Mass

GRINDERS—electric portable

Bradford Machine Tool Co 670 Evans St Cincinnati Ohio
Black & Decker Mfg Co Dept H-640 Towson 4 Md
Chicago Pneumatic Tool Co 6 E 44th St New York 17 N Y
Chicago Wheel & Mfg Co 1101 W Monroe Chgo 7 Ill
Dremel Mfg Co 2424 18th St Racine Wis
Heston & Anderson Div of St Paul Foundry & Mfg Co PO Box 431 Fairfield Ia
Independent Pneumatic Tool Co Aurora Ill
Luther Grinder & Tool Co Sheboygan Wis
Mall Tool Co 7733 South Chicago Av Chgo 19 Ill
Milwaukee Electric Tool Corp 5364 W State St Milwaukee 8 Wis
Portable Electric Tools Inc 335 W 83rd St Chgo 20 Ill
Porter-Cable Machine Co 1714 N Salina St Syracuse 8 N Y
Skilsaw Inc 5033 Elston Av Chicago 30 Ill
Speed Way Mfg Co 1834 S 52nd Av Cicero 50 Ill
Syntron Co Homer City Pa
The Stanley Works 195 Lake St New Britain Conn
U S Elec Tool Co Cincinnati O

GRINDERS—knife

Bay State Abrasive Products Co Westboro Mass
Boice-Crane Co 930 W Central Av Toledo 6 Ohio
Bridgeport Safety Emery Wheel Co Inc 550 Main St Stratford Conn
Delta Power Tool Div Rockwell Mfg Co 693-D E Vienna Av Milwaukee Wis
Dependable Machine Co Inc Greensboro N C
Hanchett Mfg Co Big Rapids Mich
Lippman Engineering Wks 4603 W Mitchell Milwaukee 14 Wis
Powermatic Machine Co McMinnville Tenn
U S Electrical Tool Co Cincinnati 14 Ohio

GRINDING COMPOUND

Clover Mfg Co Norwalk Conn
Oakite Products Inc 22 Thames St New York 6 N Y
Wayne Chemical Products Co Copeland & MCRR Detroit 17 Mich
Zip Abrasive Co 1360 W 9th St Cleveland 13 Ohio

GRINDING WHEELS

Abrasive Products Inc South Braintree Mass
American Emery Wheel Wks Providence 1 R I
Bay State Abrasive Products Co Westboro Mass
Carborundum Co Niagara Falls N Y
Chicago Wheel & Mfg Co 1101 W Monroe Chgo 7 Ill
Cortland Grinding Wheels Corp Chester Mass
Goodrich Grinding Wheel Co 1500 W Madison Chgo Ill
Hanchett Mfg Co Big Rapids Mich
Macklin Co Jackson Mich
Mid-West Abrasive Co 500 S Washington St Owosso Mich
Norton Co 1 New Bond St Worcester 6 Mass
Raybestos-Manhattan Inc Passaic N J
Simonds Abrasive Co Philadelphia 37 Pa
The Sterling Grinding Wheel Div of The Cleveland Quarries Co Tiffin O
Vitrified Wheel Co Westfield Mass

GROOVERS

Ekstrom Carlson & Co 1417 Railroad Av Rockford Ill
Huther Bros Saw Mfg Co Inc 12900 University Av Rochester 7 N Y
Macklanburg-Duncan Co Oklahoma City 1 Okla
Mall Tool Co 7733 S Chicago Av Chicago 19 Ill
Protex Weatherstrip & Mfg Co 4508 S Western Av Chicago 9 Ill
Simonds Saw & Steel Co Fitchburg Mass
Wilson Saw Div Media Machine Works Inc Media Pa

GUMMERS—saw

Belsaw Machy Co 315 Westport Rd Kansas City 2 Mo
Clizbe Bros Mfg Co Portsmouth Ind
Hanchett Mfg Co Big Rapids Mich
Luther Grinder & Tool Co Sheboygan Wis
Macklin Co Jackson Mich
Norton Co 1 New Bond St Worcester 6 Mass
Samuel C Rogers & Co 191 Dutton Av Buffalo 11 N Y
Wisconsin Abrasive Mfg Co 1300 E Park Pl Milwaukee 11 Wis

GUTTERS—metal

Alabama Metal Lath Co PO Box 992 Birmingham Ala
Badger Corrugating Co La Crosse Wis
Ceco Steel Products Corp 5601 W 26th St Chgo 50 Ill
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Cincinnati Sheet Metal & Roofing Co Cincinnati 2 Ohio
Inland Steel Prods Co 4027 W Burnham Milwaukee 1 Wis
LaCrosse Steel Roofing & Corrugating Co LaCrosse Wis
Mid-States Steel & Wire Co Crawfordsville Ind
Nichols Wire & Aluminum Co Davenport Iowa
Northwest Metal Products Inc 55 Spokane St Seattle 4 Wash
Penn Supply & Metal Corp 1831 N 5th St Philadelphia 22 Pa (also fittings)
Reeves Steel & Mfg Co Dover Ohio
Republic Steel Corp Berger Mfg Div Canton 5 Ohio
Reynolds Metals Co Bldg Products Section 2002 S 9th St Louisville 1 Ky
St Paul Corrugating Co St Paul 1 Minn
Wheeling Corrugating Co Wheeling W Va

GUTTERS—wood

Aloha Lumber Co Aloha Wash
Air-King Mfg Corp Tigard Ore
American Lumber & Treating Co 332 S Michigan Av Chicago 4 Ill
Duncan Fir Gutter Co Inc 818 Securities Bldg Seattle Wash
Fordyce Lumber Co Fordyce Ark
Georgia-Pacific Plywood Co Southern Finance Bldg Augusta Ga
Holmes-Eureka Lbr Co San Francisco Cal
Wm Hulbert Mill Co Everett Wash
The Long-Bell Lbr Co R A Long Bldg Kansas City 6 Mo & Longview Wash
Long Fir Gutter Co 601 Dewey Av Cadiz O
Geo J Silbernagel 8 S Michigan Av Chicago 3 Ill
Union Lbr Co San Francisco Cal
Washington Mfg Co PO Box 1544 Tacoma 1 Wash
Weyerhauser Sales Co St Paul Minn
Willamette Valley Lbr Co Dallas Ore

GUTTER SCREENS

Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Gutter Screen Mfg Co Newark 4 N J
Wynnco Products Corp 344 Luckie St NW Atlanta Ga

HAMMERS—claw, carpenter, etc

Champion-De Arment Tool Co Meadville Pa
Fairmont Tool & Forging Co 10611 Quincy Av Cleveland Ohio
Goldblatt Tool Co 1924 Walnut St Kansas City 6 Mo
Heller Bros Co Newark 4 N J
Leetonia Tool Co Leetonia Ohio
Marion Tool Corp Marion Ind
Markwell Mfg Co Inc 200 Hudson St New York 12 N Y
David Maydole Tool Corp Norwich N Y
Mephisto Tool Co Inc Hudson N Y
Ox-Wall Tool Co 928 Broadway New York 10 N Y
Peck Stow & Wilcox Co Southington Conn
Fayette R Plumb Inc 4837 James St Philadelphia 37 Pa
Stanley Tools Div of Stanley Wks 111 Elm St New Britain Conn
Vaughan & Bushnell Mfg Co 135 S La Salle Chgo Ill

HAMMERS—portable electric

Black & Decker Mfg Co Dept H-640 Towson 4 Md
Chicago Pneumatic Tool Co 6 E 44th N Y N Y
Goldblatt Tool Co 1924 Walnut St Kansas City 6 Mo
Independent Pneumatic Tool Co Aurora Ill
Millers Falls Co Greenfield Mass
Milwaukee Electric Tool Corp 5364 W State St Milwaukee 8 Wis

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Skilsaw Inc 5033 Elston Av Chicago 30 Ill
Stanley Works New Britain Conn
Syntron Co Homer City Pa

HAMMERS—saw setting

E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Hanchett Mfg Co Big Rapids Mich
Simonds Saw & Steel Co Fitchburg Mass

HANDLES—broom & mop

W F Brown & Son Inc Denham Springs La
Chicago Wood & Plastic Plants 4201 W Irving Park Chicago 41 Ill
Dowel House 6315 Yale Av Chicago 21 Ill
Himmelberger-Harrison Mfg Co Cape Girardeau Mo
Holt Hardwood Co Oconto Wis
G F League Lbr Co Box 125 Greenville S C
McMinnville Handle Co McMinnville Tenn
Meyer Handle & Veneer Co Magazine Ala
Northwoods Mfg Co Inc Manistique Mich
Norton Mfg Co Main & Bodley Memphis 9 Tenn
Robinson Wood Turning Co Burlington Vt
H A Stiles Co 160 N Washington St Boston 14 Mass
Washington Handle Co Tacoma Wash

HANDLES—carpenter tool

Chicago Wood & Plastic Plants 4201 W Irving Park Chicago 41 Ill
R F Cooke Mfg Co Orange Mass
Dowel House 6315 Yale Av Chicago 21 Ill
E B Estes & Sons Inc 155 E 44th N Y N Y
Marion Handle Mills Inc Marion Va
Fayette R Plumb Inc 4837 James St Philadelphia 37 Pa
H A Stiles Co 160 N Washington St Boston 14 Mass
Union Hdwe Co Torrington Conn

HANGERS—joist & timber

Allen Steel Products Inc 12911 Hillview Detroit 27 Mich
Cleveland Steel Specialty Co Inc 3765 E 91st St Cleveland 5 Ohio
The Donley Bros Co 13928 MilesAv Cleveland 5 Ohio
Gabriel Steel Co Cat A 13700 Sherwood Detroit 12 Mich
Harvard Metal Products Inc 97-99 Reading St Roxbury 19 Mass
Hosking Paper & Supply P O Drawer 43 Wilmette Ill
Ideal Hanger Co 1273 E 53rd Cleveland 14 Ohio
Lanebro Mfg Co 110 Main St Poughkeepsie N Y
Timber Engineering Co 1319 18th St N W Washington 6 D C
Wagner Mfg Co Cedar Falls Iowa (studding sockets)

HANGERS—pipe & cabinet

Carpenter & Paterson Inc 1190 Bennington East Boston 28 Mass
Hubbard & Co 6301 Butler St Pittsburgh 1 Pa
Illinois Malleable Iron Co 1801 Diversey Pkwy Chgo Ill
Paine Co 2951 Carroll Av Chgo 12 Ill

HANGERS & TRACK—door

Allith-Prouty Inc Danville Ill
Clay Equipment Corp Cedar Falls Iowa
Colorado Fuel & Iron Corp Wickwire Spencer Steel Div 500 Fifth Av New York 18 N Y
Frantz Mfg Co Sterling Ill
Grant Pulley & Hdwe Co 31-89 Whitestone Pkwy Flushing N Y
Louden Machinery Co Fairfield Ia
Metal Prods Corp Hardware Div "W" 307 N W 20th St Miami 37 Fla
McKinney Mfg Co 1400 Metropolitan St Pittsburgh Pa
National Mfg Co Sterling Ill
The Ney Mfg Co 948 High Av Canton 4 Ohio
Olson Mfg Co Albert Lea Minn
Osborn Garage Door Hdwe Div of Arrowsmith Tool & Die Co 9700 Bellanca Av Los Angeles 45 Cal
S Parker Hdwe Mfg Corp 27 Ludlow New York 2 N Y
Richards-Wilcox Mfg Co Aurora Ill
Sharon Hdwe Mfg Co Sharon Pa
The Stanley Works New Britain Conn
Starline Inc Harvard Ill
Wagner Mfg Co Dept ALG-52 Cedar Falls Ia

HARDWARE—awning window

P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Gate City Sash & Door Co Box 901 Fort Lauderdale Fla
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis 4 Mo
Chas O Larson Co Sterling Ill
Mutual Fir Column Co Tacoma Wash
Slaymaker Lock Co 105 W End Av Lancaster Pa
Sterling Hardware Mfg Co 2345 W Nelson Chciago 18 Ill
Super-Vent Co 905 W North Av Chicago 41 IIIl
Superior Window Co 5300 N W 37th Av Miami Fla

HARDWARE—boat dock

Central Machine Works Co 1208 Central Av Minneapolis 13 Minn
Slaymaker Lock Co 105 W End Av Lancaster Pa

HARDWARE—cabinet

Adams-Rite Mfg Co 540 W Chevy Chase Dr Glendale 4 Cal
Ajax Hdwe Mfg Corp Dept 2A 4351 Valley Blvd Los Angeles 32 Calif
Akron Hdwe Mfg Corp 32-01 57th St Woodside N Y
American Cabinet Hdwe Corp Dept 47 Rockford Ill
Austin & Eddy Inc 115 Broad St Boston Mass
Cleveland Lock Wks 1273 E 53rd St Cleveland 14 Ohio
Corbin Cabinet Lock Div The American Hdwe Corp New Britain Conn
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Eagle Lock Co Terryville Conn
Engineered Products Co Flint Mich
Frantz Mfg Co Sterling Ill
Gensco Tool Div General Steel Warehouse Co Inc 1812 N Kostner Ave Chicago 39 Ill
Grand Rapids Hdwe Co Grand Rapids Mich
Griffin Mfg Co Erie Pa
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis Mo
Harris Inc 200 E Long St Columbus 15 Ohio
Knape & Vogt Mfg Co 658 Richmond St N W Grand Rapids 4 Mich
Laboratory Equipment Corp St Joseph Mich
McKinney Mfg Co 1400 Metropolitan St Pittsburgh Pa
Nat'l Brass Co Grand Rapids 2 Mich
Natl Lock Co Rockford Ill
National Mfg Co Sterling Ill
S Parker Hardware Mfg Co 27 Ludlow New York 2 N Y
Russell & Erwin Div The American Hardware Corp New Britain Conn
Safe Padlock & Hdwe Co Lancaster Pa
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Walter E Selck & Co 225 W Hubbard Chicago 10 Ill
Slaymaker Lock Co 105 W End Av Lancaster Pa
Standard Bronze Co Bayonne 8 N J
The Stanley Works New Britain Conn
Technical Glass Co Inc 2050 E 48th St Los Angeles 58 Calif
Vimcar Sales Co 3001 E Pico Blvd Los Angeles 23 Cal
Washington Steel Prods Inc 1940 E 11th St Tacoma 2 Wash

HARDWARE—casement

Casement Hdwe Co 404 N Wood Chgo Ill
Champion Hardware Co Geneva Ohio
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Detroit Hdwe Mfg Co 1320 Mt Elliott Av Detroit 7 Mich
Fiwale Equipment Mfg Co 105 Reade St New York 13 N Y
H S Getty Co Inc 3348 N 10th St Philadelphia 40 Pa
Grant Pulley & Hdwe Co 33-36 57th Woodside L I N Y
Griffin Mfg Co Erie Pa
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis Mo
Ideal Brass Works Inc 250 E 5th St St Paul 1 Minn
H B Ives Co New Haven 8 Conn
McKinney Mfg Co 1400 Metropolitan St Pittsburgh 12 Pa
National Brass Co Grand Rapids Mich
Peabody Co Inc 5816 S Hooper Av Los Angeles 11 Cal
Russell & Erwin Div The American Hdw Corp New Britain Conn
Safe Padlock & Hdwe Co Lancaster Pa
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Slaymaker Lock Co 105 W End Av Lancaster Pa
Sterling Hdwe Mfg Co 2345 Nelson St Chicago 18 Ill
Wright Products Inc St Paul Park Minn
Yale & Towne Mfg Co Stamford Conn

HARDWARE—clothes closet

Ajax Hdwe Mfg Corp Dept 2A 4351 Valley Blvd Los Angeles 32 Calif
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis Mo
Harloc Products Corp 25 Fox St New Haven Conn
Jay G McKenna Inc Dept A-41 Elkhart Ind
Knape & Vogt Mfg Co Dept N40 658 Richmond St N W Grand Rapids 4 Mich
S Parker Hdwe Mfg Corp 27 Ludlow New York 2 N Y
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Slaymaker & Co 105 W End Av Lancaster Pa
The Stanley Works New Britain Conn
Vimcar Sales Co 3001 E Pico Blvd Los Angeles 23 Cal

HARDWARE—concrete form

Colorcrete Industries Inc Holland Mich
Sommer Metalcraft Corp Crawfordsville Ind
Williams Form Engineering Corp 1501 Madison Av S E Grand Rapids Mich
Winner Industries 1023 Washington Av So Minneapolis 15 Minn

HARDWARE—garage, overhead type

Allith-Prouty Inc Danville Ill
Better-Bilt Door Co Egg Harbor N J
Calder Mfg Co Inc 630 N Prince St Lancaster 4 Pa
Capitol Products PO Box 1240 Springfield Ill
Crawford Door Co 401 St Jean Av Detroit Mich
Frantz Mfg Co Sterling Ill
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis Mo
Howell Mfg Co 7200 Hasbrook Av Philadelphia 11 Pa
Louden Machinery Co Fairfield Ia
National Mfg Co Sterling Ill
Osborne Garage Door Hdwe Div of Arrowsmith Tool & Die Co 9700 Bellanca Av Los Angeles 45 Cal
Phenix Mfg Co 4129 N Port Washington Rd Milwaukee 12 Wis
Richards-Wilcox Mfg Co Aurora Ill
Stamping Prods & Mfg Co Steel Door 14001 Intervale Av Detroit 27 Mich
Standard Bronze Co Bayonne 8 N J
The Stanley Works New Britain Conn
Starline Inc Harvard Ill
Tavart Co 15134 S Orizaba Av Paramount Calif
Vimcar Sales Co 3001 E Pico Blvd Los Angeles 23 Cal
Wagner Mfg Co Dept ALG-52 Cedar Falls Ia
Wickwire Spencer Steel A Div of The Colorado Fuel & Iron Corp 500 Fifth Av New York 18 N Y

HARDWARE—plastic, handles & knobs

Akron Hdwe Mfg Corp 32nd & 57th St Woodside N Y
Champion Hdwe Co Geneva O
Chicago Wood & Plastic Plants 4201 Irving Park Blvd Chicago 41 Ill
Hollymade Hdwe Mfg Co 4865 Exposition Blvd Los Angeles 16 Calif
H B Ives Co New Haven Conn
Modern Plastic Co Los Angeles 11 Calif
S Parker Hardware Mfg Co 27 Ludlow New York 2 N Y
Slaymaker Lock Co 105 W End Av Lancaster Pa
Superior Plastics Div Commonwealth Plastics Inc 426 N Oakley Blvd Chicago 12 Ill
U S Sliding Door Corp 404 E 108th St New York N Y
Washington Steel Prods Inc 1940 E 11th St Tacoma 2 Wash

HARDWARE—sliding door residence

Adams-Rite Mfg Co 540 W Chevy Chase Dr Glendale 4 Cal
Clinton Lock Co Clinton Iowa
P & F Corbin New Britain Conn
Engineered Prods Co Flint Mich
Frantz Mfg Co Sterling Ill
Grant Pulley & Hdwe Co 31-89 Whitestone Pkwy Flushing N. Y.
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis Mo
Knape & Vogt Mfg Co 658 Richmond St N W Grand Rapids 4 Mich
Lockwood Hdwe Mfg Co 35 Daniels St Fitchburg Mass

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

J G McKenna Inc Dept A-41 Elkhart Ind
Macklanburg-Duncan Co Oklahoma City 1 Okla
Metal Products Corp Hardware Div "W" 807 NW 20th St Miami Fla
National Mfg Co Sterling Ill
Nordahl Mfg Co 180 W Alameda Burbank Calif
Peabody Co Inc 5816 S Hooper Av Los Angeles Calif (locks)
Richards-Wilcox Mfg Co Aurora Ill
Russell-Erwin Div The American Hdwe Corp New Britain Conn
The Stanley Works 195 Lake St New Britain Conn
Sterling Hdwe Mfg Co 2341 W Nelson Chgo 18 Ill
Vimcar Sales Co 3001 E Pico Blvd Los Angeles 23 Cal
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp 500 Fifth Av NY 18 NY

HARDWARE—sliding, folding garage

Ajax Hdwe Mfg Co Dept 2A 4351 Valley Blvd Los Angeles 32 Calif
Allith-Prouty Inc Danville Ill
Clinton Lock Co Clinton Ia
Colorado Fuel & Iron Corp Wickwire Spencer Steel Div 500 Fifth Av New York 18 N Y
Frantz Mfg Co Sterling Ill
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis Mo
Griffin Mfg Co Erie Pa
Harvard Metal Products Inc 97-99 Reading St Roxbury 19 Mass
Lockwood Hdwe Mfg Co 35 Daniels St Fitchburg Mass
Macklanburg-Duncan Co Oklahoma City 1 Okla
McKinney Mfg Co 1400 Metropolitan St Pittsburgh Pa
National Mfg Co Sterling Ill
The Ney Mfg Co 948 High Av S W Canton 4 Ohio
S Parker Hardware Mfg Corp 27 Ludlow New York 2 N Y
Peabody Co Inc 5816 S Hooper Av Los Angeles 11 Cal
Richards-Wilcox Mfg Co Aurora Ill
Russell & Erwin Div American Hdwe Corp New Britain Conn
Sharon Hdwe Mfg Co Sharon Pa
The Stanley Works 195 Lake St New Britain Conn
Starline Inc Harvard Ill
Wagner Mfg Co Dept ALG-52 Cedar Falls Ia

HARDWARE—storm sash & screen

Ajax Hdwe Mfg Corp Dept 2A 4351 Valley Blvd Los Angeles 32 Cal
Acorn Mfg Co Mansfield Mass
Adams-Rite Mfg Co 540 W Chevy Chase Dr Glendale 4 Cal
Champion Hardware Co Geneva Ohio
Clinton Lock Co Clinton Iowa
Colgate Mfg Corp 152 S 15th St Lindenhurst L I N Y
Colorado Fuel & Iron Corp Wickwire Spencer Steel Div 500 Fifth Av New York 18 N Y
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Engineered Prods Co Flint Mich
Frantz Mfg Co Sterling Ill
Griffin Mfg Co Erie Pa
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis Mo
Ideal Brass Works Inc 250 E 5th St St Paul 1 Minn
F D Kees Mfg Co Beatrice Neb
Chas O Larson Co Sterling Ill
Ludwig Mfg Co Inc 2401 Durand Rd Racine Wis
Metal Products Corp Hardware Div "W" 807 NW 20th St Miami 37 Fla
National Lock Co Rockford Ill
National Mfg Co Sterling Ill
Phenix Mfg Co 4129 N Port Washington Rd Milwaukee 12 Wis
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Safe Padlock & Hdwe Co Lancaster Pa
Sager Lock Works North Chicago Ill
Sharon Hdwe Mfg Co Sharon Pa
Slaymaker Lock Co 105 W End Av Lancaster Pa
The Stanley Works 195 Lake St New Britain Conn
Sterling Hdwe Mfg Co 2341 W Nelson Chicago 18 Ill
Vimcar Sales Co 3001 E Pico Blvd Los Angeles 23 Cal
Wright Products Co St Paul Park Minn
Yale & Towne Mfg Co Stamford Conn

HASPS—hinge

Akron Hdwe Mfg Corp 32nd Av & 57th St Woodside N Y
Champion Hdwe Co Geneva O
Corbin Cabinet Lock Div The American Hdwe Corp New Britain Conn
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Frantz Mfg Co Sterling Ill
Gensco Tool Div General Steel Warehouse Co Inc 1812 N Kostner Ave Chicago 39 Ill
Griffin Mfg Co Erie Pa
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis Mo
Master Lock Co 2600 N 32nd St Milwaukee 45 Wis
McKinney Mfg Co Pittsburgh Pa
National Lock Co Rockford Ill
National Mfg Co Sterling Ill
S Parker Hardware Mfg Co 27 Ludlow New York 2 N Y
Richards-Wilcox Mfg Co Aurora Ill
Safe Padlock & Hdwe Co Lancaster Pa
Sharon Hdwe Mfg Co Sharon Pa
Slaymaker Lock Co 105 W End Av Lancaster Pa
The Stanley Works 195 Lake St New Britain Conn

HEATERS—coal

American Radiator & Standard Sanitary Corp Bessemer Bldg Pittsburgh 22 Pa
Crane Co 836 S Michigan Av Chicago 5 Ill
International Heater Co Utica 2 N Y
King Stove & Range Co Sheffield Ala
Locke Stove Co 114 W 11th St Kansas City 6 Mo
Norge Heat Div Borg-Wagner Corp 672 E Woodbridge St Detroit 26 Mich
Red Jacket Coal Corp 115 E Rich St Columbus 15 Ohio

HEATERS—concrete

American Steel Works 1211 W 27th St Kansas City 8 Mo
Hauck Mfg Co 126 10th St Brooklyn 15 N Y
Unique Mfg Co Inc 221 W Walton Chgo Ill

HEATERS—electric

Frank Adam Electric Co 3650 Windsor Pl St Louis Mo
Armstrong Products Corp Huntington 12 W Va
Coburn Mfg Co Whitewater Wis
Eagle Electric Mfg Co Inc 23-10 Bridge Plaza South Long Island City 1 N Y
Emerson Electric Mfg Co 8100 Florissant Av St Louis 21 Mo
Excelsior Stove & Mfg Co Quincy Ill
General Electric Co Schenectady 5 N Y
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Shepler Mfg Co 1312 Sheffield St Pittsburgh 33 Pa (built-on bathroom)
O A Sutton Corp 1812 W 2nd St Wichita Kans
Waage Electric Inc 720 Colfax Av Kenilworth N J
Westinghouse Electric Corp 306 4th Av Pittsburgh 30 Pa

HEATERS—gas

American Gas Machine Co 505 Front St Albert Lea Minn
Armstrong Products Corp Huntington 12 W Va
American Radiator & Standard Sanitary Corp Bessemer Bldg Pittsburgh 22 Pa
Chattanooga Implement & Mfg Co Chattanooga Tenn
Crane Co 836 S Michigan Av Chicago 5 Ill
Excelsior Stove & Mfg Co
Gray & Dudley Co 2300 Clifton Rd Nashville 3 Tenn
King Stove & Range Co Sheffield Ala
Locke Stove Co 114 W 11th St Kansas City 6 Mo
Norge Heat Div Borg-Warner Corp 672 E Woodbridge St Detroit 26 Mich
Quaker Mfg Co 223 W Erie Chicago Ill
Quincy Stone Mfg Co Quincy Ill
Shepler Mfg Co 1312 Sheffield St Pittsburgh 33 Pa
Surface Combustion Corp Toledo 1 Ohio
Temco Inc 4104 Park Av Nashville 9 Tenn
The Trane Co LaCrosse Wis
Tri-Therm Heater Co 40 Howard St Somerville 44 Mass

HEATERS—oil

Aeroil Burner Co Inc Park Av & 57th West New York N J
Century Engineering Corp Cedar Rapids Ia
The Coleman Co Inc Wichita 1 Kan
The Estate Stove Co Hamilton Ohio
Excelsior Stove & Mfg Co Quincy Ill
General Electric Co Schenectady 5 N Y
Gray & Dudley Co 2300 Clifton Rd Nashville 3 Tenn
International Heater Co Utica 2 N Y
Locke Stove Co 114 W 11th St Kansas City 6 Mo
The Macleod Co 2236 Bogen St Cincinnati 22 Ohio
Norge Heat Div Borg-Warner Corp 672 E Woodbridge St Detroit 26 Mich
Northwest Metal Products Inc 55 Spokane St Seattle 4 Wash
Perfection Stove Co 7609 Platt Av Cleveland O
Prentice Wahers Prods Co Wisconsin Rapids Wis
Quaker Mfg Co 223 West Erie Chicago Ill
Quincy Stove Mfg Co Quincy Ill
Silent Sioux Oil Burner Corp Orange City Iowa
York-Shipley Inc York Pa

HEATERS—radiant room

Frank Adam Electric Co 3650 Windsor Pl St Louis Mo
Armstrong Products Corp Box 940 Huntington 12 W Va
Excelsior Stove & Mfg Co Quincy Ill
Florence Stove Co Gardner Mass
Locke Stove Co 114 W 11th St Kansas City 6 Mo
David Maydone Tool Corp Norwich N Y
Perfection Stove Co 7609 Platt Av Cleveland 4 Ohio
Queen Stove Wks Albert Lea Minn
Westinghouse Electric Corp 306 4th Av Pittsburgh 30 Pa

HEATERS—tank

Brower Mfg Co Quincy Ill
Butler Co Butler Ind (stock)
Excelsior Stove & Mfg Co Quincy Ill
Farwell Ozmun Kirk & Co St Paul 1 Minn
Queen Stove Wks Albert Lea Minn
Siebring Mfg Co George Ia

HEATERS—water

American Gas Machine Co 505 Front St Albert Lea Minn
American Radiator & Standard Sanitary Corp Pittsburgh 22 Pa
Bryant Heater Co 17825 St Clair Av Cleveland 10 Ohio
Chrysler Corporation Airtemp Division Dayton 1 Ohio
The Coleman Co Inc Wichita 1 Kan
Delco Appliances Div General Motors Corp 391 Lyell Ave Rochester 1 Minn
Excelsior Stove & Mfg Co Quincy Ill
Florence Stove Co Gardner Mass
Frigidaire Div General Motors Corp Dayton 1 Ohio
General Water Heater Corp Burbank Calif
Hotpoint Inc 5600 W Taylor St Chicago 44 Ill
International Heater Co Utica 2 N Y
Kelvinator Div Nash-Kelvinator Corp 14250 Plymouth Rd Detriot 32 Mich
Kewanee Boiler Corp Kewanee Ill
Landers Frary & Clark New Britain Conn
Norge Heat Div Borg-Warner Corp 672 E Woodbridge St Detroit 26 Mich
Perfection Stove Co 7609 Platt Av Cleveland O
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Ruud Mfg Co Pittsburgh Pa
Servel Inc Evansville 20 Ind (gas)
Standard Gas Equipment Corp Baltimore Md
Timken Silent Automatic Div The Timken Detroit Axle Co Detroit 32 Mich
Vestal Stove Co Box 152-A Sweetwater Tenn
Waage Electric Inc 720 Colfax Av Kenilworth N J
Wayne Home Equipment Co 801 Glasgow Av Ft Wayne Ind
Westinghouse Electric Corp 306 4th Av Pittsburgh 30 Pa

HEATING—steam or hot water

American Radiator & Standard Sanitary Corp Pittsburgh 22 Pa
Bryant Heater Co 17825 St Clair Av Cleveland 10 Ohio
Century Engineering Corp Cedar Rapids Ia
Chrysler Corp Airtemp Div Dayton 1 Ohio
Crane Co 836 S Michigan Av Chicago 5 Ill
Delco Appliances Div General Motors Corp 391 Lyell Av Rochester 1 Minn
General Electric Co Schenectady 5 N Y
Gilbert & Barker Mfg Co West Springfield Mass
International Heater Co Utica 2 N Y
Kewanee Boiler Corp Kewanee Ill
McCord Corp Detroit Mich

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

McQuay Inc 1600 Broadway N E Minneapolis Minn
National Radiator Co 221 Central Av Johnstown Pa
Norge Heat Div Borg-Warner Corp 672 E Woodbridge St Detroit 26 Mich
Penn Boiler & Burner Mfg Corp Lancaster Pa
Surface Combustion Corp Toledo 1 Ohio
Trane Co La Crosse Wis
Williams Oil-O-Matic Div Eureka Williams Corp Bloomington Ill
York-Shipley Inc York Pa

HEATING—warm air

American Radiator & Standard Sanitary Corp Pittsburgh 22 Pa
Bryant Heater Co 17825 St Clair Av Cleveland 10 Ohio
Century Engineering Corp Cedar Rapids Ia
Chrysler Corp Airtemp Div Dayton 1 Ohio
Delco Appliances General Motors Corp 391 Lyell Av Rochester 1 Minn
Excelsior Stove & Mfg Co Quincy Ill
General Electric Co Schenectady 5 N Y
International Heater Co Utica 2 N Y
Jettronaire Inc 2417 Walnut St Mckeesport Penna
Locke Stove Co 114 W 11th St Kansas City 6 Mo
Norge Div Borg-Warner Corp Detroit 26 Mich
Payne Furnace & Supply Co Beverly Hills Cal
Perfection Stove Co 7609 Platt Av Cleveland 4 Ohio
Round Oak Co Dowagiac Mich
Silent Sioux Oil Burner Corp Orange City Pa
Surface Combustion Corp Toledo 1 Ohio
Williams Oil-O-Matic Div Eureka Williams Corp Bloomington Ill
Williamson Heater Co 4558 Marburg Av Cincinnati 9 Ohio
York-Shipley Inc York Pa

HINGES—butt

Akron Hdwe Corp 32nd Av & 57th St Woodside N Y
Corbin Cabinet Lock Div The American Hdwe Corp New Britain Conn
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Frantz Mfg Co Sterling Ill
Gensco Tool Div General Steel Warehouse Co Inc 1812 N Kostner Ave Chicago 39 Ill
H S Getty Co Inc 3348 N 10th St Philadelphia 40 Pa
Griffin Mfg Co Erie Pa
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis Mo
Ideal Brass Works Inc 250 E 5th St St Paul 1 Minn
Lawrence Bros Sterling Ill
McKinney Mfg Co Pittsburgh Pa
National Lock Co Rockford Ill
National Mfg Co Sterling Ill
S Parker Hdwe Mfg Co 27 Ludlow St New York 2 N Y
Richards-Wilcox Mfg Co Aurora Ill
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Sharon Hardware Mfg Co Sharon Pa
Slaymaker Lock Co 105 W End Av Lancaster Pa
The Stanley Works 195 Lake St New Britain Conn

HINGES—cabinet

Acorn Mfg Co Mansfield Mass
Ajax Hdwe Mfg Co Dept 2A 4351 Valley Blvd Los Angeles 32 Calif
Akron Hardware Mfg Corp 32-01 57th St Woodside N Y
American Brass Goods Co Grand Rapids 2 Mich
American Cabinet Hdwe Corp Dept AL-47 Rockford Ill
Corbin Cabinet Lock Div The American Hdwe Corp New Britain Conn
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Frantz Mfg Co Sterling Ill
Garden City Plating & Mfg Co 1750 N Ashland Chgo 22 Ill
Griffin Mfg Co Erie Pa
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis Mo
Natl Brass Co Grand Rapids Mich
National Hdwe Co 86-30 103rd Av Wdhvn NY NY
National Lock Co Rockford Ill
National Mfg Co Sterling Ill
S Parker Hdwe Mfg Co 27 Ludlow New York 2 N Y
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Walter E Selck & Co 225 W Hubbard Chicago 10 Ill
Washington Steel Prods Inc 1940 E 11th St Tacoma 2 Wash
Sharon Hdwe Mfg Co Sharon Pa
Slaymaker Lock Co 105 W End Av Lancaster Pa
Soss Mfg Co 21787 Hoover Rd Detroit 13 Mich
The Stanley Wks New Britain Conn

HINGES—gate

P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Frantz Mfg Co Sterling Ill
Griffin Mfg Co Erie Pa
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis Mo
Ideal Brass Works Inc 250 E 5th St St Paul 1 Minn
McKinney Mfg Co Pittsburgh 12 Pa
National Mfg Co Sterling Ill
Standard Bronze Co Bayonne 8 N J
The Stanley Works New Britain Conn

HINGES—invisible

Griffin Mfg Co Erie Pa
S Parker Hdwe Mfg Corp 27 Ludlow New York 2 N Y
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Soss Mfg Co 21787 Hoover Rd Detroit 13 Mich

HINGES—spring door

Bommer Spring Hinge Co Inc 263 Classon Brooklyn 5 N Y
Champion Hardware Co Geneva Ohio
Chicago Spring Hinge Co 1500 W Carroll Chgo 7 Ill
Cleveland Lock Wks Div of Consolidated Iron-Steel Mfg. Co. 1273 E 53rd St Cleveland 14 Ohio
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Frantz Mfg Co Sterling Ill
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis Mo
Gensco Tool Div General Steel Warehouse Co Inc 1812 N Kostner Ave Chicago 39 Ill
Milwaukee Stamping Co 800 S 72nd St Milwaukee 14 Wis
National Mfg Co Sterling Ill
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Sharon Hdwe Mfg Co Sharon Pa
The Stanley Works New Britain Conn

HINGES—strap

Akron Hdwe Mfg Corp 32-01 57th St Woodside N Y
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Fiwale Equipment Mfg Co 105 Reade St NY 13 NY
Frantz Mfg Co Sterling Ill
Gensco Tool Div General Steel Warehouse Co Inc 1812 N Kostner Ave Chicago 39 Ill
Griffin Mfg Co Erie Pa
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis Mo
McKinney Mfg Co 1400 Metropolitan St Pittsburgh 12 Pa
Natl Brass Co Grand Rapids Mich
National Lock Co Rockford Ill
National Mfg Co Sterling Ill
Reflecto Letters Inc 411 E 101st St New York 29 N Y
Richards-Wilcox Mfg Co Aurora Ill
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Sharon Hdwe Mfg Co Sharon Pa
Slaymaker Lock Co 105 W End Av Lancaster Pa
Standard Bronze Co Bayonne 8 N J
The Stanley Works New Britain Conn

HOG HOUSE EQUIPMENT

Brower Mfg Co Box 251 Quincy Ill
Clay Equipment Corp Cedar Falls Ia
The Hargrove Co 4th & NY Des Moines Iowa
James Mfg Co Ft Atkinson Wis
F D Kees Mfg Co Box 8 Beatrice Neb
Louden Machinery Co Fairfield Ia
Ney Mfg Co Canton 4 Ohio
Olson Mfg Co Albert Lea Minn
Starline Inc Harvard Ill

HOISTS—chain

Bridgeport Chain & Mfg Co Bridgeport 1 Conn
Chester Hoist Div Lisbon Ohio
Chisholm Moore Hoist Corp Tonawanda N Y
Cleveland Tramrail Div The Cleveland Crane & Engineering Co 5866 E 289th St Wickliffe Ohio
Coffing Hoist Co 800 Walter St Danville Ill
Ford Chain Block Div American Chain & Cable Co Inc Philadelphia 25 Pa
Reading Chain & Block Corp 2100 Adams St Reading Pa
Wright Hoist Div American Chain & Cable Co Inc York Pa
Yale & Towne Mfg Co Phil Pa

HOISTS—drum

Cleveland Tramrail Div The Cleveland Crane & Engineering Co 5866 E 289th St Wickliffe Ohio
Clyde Iron Works Inc Duluth 1 Minn
Construction Machinery Co Waterloo Iowa
Electro Lift Inc 30 Church St New York 7 N Y
Godfrey Conveyor Co Inc Elkhart Ind
Johnson Mfg Co Inc Fox Av & Holly St Seattle 8 Wash
Kewanee Mfg Co 452 Burlington Av Kewanee Ill
National Screw & Mfg Co 2440 E 75th St Cleveland 4 Ohio
Shepard Niles Crane & Hoist Corp Montour Falls N Y
Silent Hoist & Crane Co Inc 860-63rd St Brooklyn 20 N Y
Stimel Winch Co 37-24 33rd St Long Island City 1 N Y
Vulcan Iron Wks Co 1423 Stout St Denver 2 Colo
Yale & Towne Mfg Co Phil Pa

HOISTS—electric

American Engineering Co Aramingo Av & Clumberland St Philadelphia 25 Pa
American Hoist & Derrick Co 63 S Robert St Paul 1 Minn
Bridgeport Chain & Mfg Co Bridgeport 1 Conn
C H & E Mfg Co 3849 N Palmer St Milwaukee 12 Wis
Chisholm-Moore Hoist Corp Tonawanda N Y
Cleveland Tramrail Div The Cleveland Crane & Engineering Co 5866 E 289th St Wickliffe Ohio
Clyde Iron Works Inc Duluth 1 Minn
Coffing Hoist Co Danville Ill
Detroit Hoist & Machine Co 8231 Morrow St Detroit 11 Mich
Electro Lift Inc 30 Church St New York 7 N Y
Industrial Equipment Co 315 N Ada St Chicago 7 Ill
Johnson Mfg Co Inc Fox Av & Holly St Seattle 8 Wash
Reading Chain & Block Corp 2100 Adams St Reading Pa
Silent Hoist & Crane Co Inc 860-63rd St Brooklyn 20 N Y
Washington Iron Wks Seattle 4 Wash
Wright Hoist Div American Chain & Cable Co Inc York Pa
The Yale & Towne Mfg Co Philadelphia 24 Pa

HOISTS—gasoline

American Hoist & Derrick Co 63 S Robert St Paul 1 Minn
C H & E Mfg Co 3849 N Palmer St Milwaukee 12 Wis
Clyde Iron Wks Inc Duluth 1 Minn
Jaeger Machine Co 550 W Spring St Columbus 16 Ohio
Johnson Mfg Co Inc Fox Av & Holly St Seattle 8 Wash
Novo Engine Co Lansing 5 Mich
Silent Hoist & Crane Co Inc 860-63rd St Brooklyn 20 N Y
Stimel Winch Co 37-24 33rd St Long Island Ctiy 1 N Y
Washington Iron Wks Seattle 4 Wash

HOISTS—hydraulic dumping

Anthony Co Streator Ill
Galion Allsteel Body Co Galion O
Heil Co Milwaukee Wis
Kewanee Mfg Co 452 Albur Av Kewanee Ill
St Paul Hydraulic Hoist 2207 University Av S E Minneapolis 14 Minn
Yale & Towne Mfg Co Phil Pa

HOISTS—rope

C H & E Mfg Co 3849 N Palmer St Milwaukee 12 Wis
Coburn Mfg Co Whitewater Wis
Detroit Hoist & Machine Co 8231 Morrow St Detroit 11 Mich
Franklin Equipment Co Monticello Iowa
Lanebro Mfg Co 110 Main St Poughkeepsie N Y
Louden Machine Co Fairfield Ia
The Ney Mfg Co 948 High Av S W Canton 4 Ohio
Shepard Niles Crane & Hoise Corp Montour Falls N Y

HOME APPLIANCES

Admiral Corp 3800 W Cortland Chgo 47 Ill
Apex Rotarex Corp Cleveland 10 Ohio
The Coolerator Co PO Box 399 Duluth 1 Minn

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Frigidaire Div General Motors Corp Dayton 1 Ohio
General Electric Co Schenectady 5 N Y
Hotpoint Inc 5600 W Taylor St Chicago 44 Ill
Landers Frary & Clarke New Britain Conn
Nineteen Hundred Corp St Joseph Michigan
Perfection Stove Co 7609 Platt Av Cleveland 4 Ohio
Westinghouse Electric Corp 306 4th Av Pittsburgh 30 Pa

HOME COOLERS

Bryant Heater Div Affiliated Gas Equip Inc 17825 St Clair Av Cleveland 10 Ohio
Essic Mfg Co 1950 Santa Fe Av Los Angeles 21 Cal
General Electric Co 1 River Rd Schenectady 5 N Y
Westinghouse Electric Corp 306 4th Av Pittsburgh 30 Pa

HOME WORKSHOP EQUIPMENT

E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Black & Decker Mfg Co Dept H640 Towson 4 Md
Boice-Crane Co 930 W Central Av Toledo 6 Ohio
Buss Machine Works Holland Mich
Delta Power Tool Div Rockwell Mfg Co 692-D E Vienna Ave Milwaukee 1 Wis
Dremel Mfg Co Racine Wis
Independent Pneumatic Tool Co Aurora Ill
Mall Tool Co 7733 South Chicago Av Chgo 19 Ill
Markwell Mfg Co Inc 200 Hudson St New York 13 N Y
Millers Falls Co Greenfield Mass
Parks Woodworking Machine Co Cincinnati Ohio
Skilsaw Inc 5033 N Elston Chicago Ill
J D Wallace & Co 153 S California Chicago 12 Ill
Yates American Machine Co Beloit Wis

HOODS—ventilating kitchen

Badger Corrugating Co LaCrosse Wis
Gichner Inc 1900 Kendall St N E Washington 2 D C
Fawsco Mfg Div Falls Stamping & Welding Co Cuyahoga Falls Ohio
Vent-A-Hood Co Dallas 9 Tex

HOOKS—coat

Ajax Hdwe Mfg Corp Dept 2A 4351 Valley Blvd Los Angeles 32 Cal
The Autoyre Co Dept D Oakville Conn
P & F Corbin Div The American Hdwe Corp New Britain Conn
Frantz Mfg Co Sterling Ill
H B Ives Co New Haven Conn
Chas O Larson Co Sterling Ill
Peabody Co Inc 5816 S Hooper Av Los Angeles 11 Cal
Penn Hdwe Co Reading Pa
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Sommer Metalcraft Corp Crawfordsville Ind
Standard Bronze Co Bayonne 8 N J

HOSE—air compressor

Acme Rubber Mfg Co Trenton N J
Boston Woven Hose & Rubber Co Cambridge Mass
Broadway Rubber Mfg Co 529 E Broadway Louisville 2 Ky
Cincinnati Rubber Mfg Co 4900 Franklin Av Cincinnati 12 Ohio
Continental Rubber Wks Erie Pa
DeVilbiss Co 300 Phillips Av Toledo 1 Ohio
Gates Rubber Co 999 S Broadway Denver 17 Colo
Goodall Rubber Co 5 S 36th Philadelphia 4 Pa
The B F Goodrich Co Akron Ohio
Raybestos-Manhattan Inc Passaic N J
Union Rubber & Asbestos Co Trenton N J
U S Rubber Co 1230 Avenue of the Americas New York 20 N Y

HOSE—garden, industrial

Acme Rubber Mfg Co Trenton N J
Boston Woven Hose & Rubber Co Cambridge Mass
Broadway Rubber Mfg Co 529 E Broadway Louisville 2 Ky
Cincinnati Rubber Mfg Co 4900 Franklin Av Cincinnati 12 Ohio
Continental Rubber Works Erie Pa
Gates Rubber Co 999 S Broadway Denver 17 Colo
Goodall Rubber Co 5 S 36th Philadelphia 4 Pa
The B F Goodrich Co Akron Ohio
Raybestos-Manhattan Inc Passaic N J
Republic Rubber Div Lee Rubber & Tire Corp Youngstown 1 Ohio
Thermoid Co Trenton 6 N J
Union Rubber & Asbestos Co Trenton N J
U S Rubber Co 1230 Avenue of the Americas New York 20 N Y

HOSE—linen fire

W D Allen Mfg Co 566 W Lake Chicago Ill
Boston Woven Hose & Rubber Co Boston Mass
Broadway Rubber Mfg Co 529 E Broadway Louisville 2 Ky
Continental Rubber Works Erie Pa
Goodall Rubber Co 5 S 36th Philadelphia 4 Pa
Raybestos-Manhattan Inc Passaic N J
Union Rubber & Asbestos Co Trenton N J
U S Rubber Co 1230 Avenue of the Americas New York 20 N Y
Wirt & Knox Mfg Co Phil 32 Pa

HOUSE NUMBERS

Ajax Hdwe Mfg Corp Dept 2A 4351 Valley Blvd Los Angeles 32 Cal
Cambridge Tile Mfg Co Box 71 Cincinnati 15 Ohio (tile)
Champion Hardware Co Geneva Ohio
P & F Corbin Div The American Hdwe Corp New Britain Conn
Ideal Brass Wks Inc 250 E 5th St St Paul 1 Minn
Macklanburg-Duncan Co Oklahoma City 1 Okla (also letters)
Nu Tone Inc Dept AL-4 Red Bank & Madison Rd Cincinnati 27 Ohio
Premax Products Div Chisolm-Ryder Co Inc Hyland & College Ave Niagara Falls N Y
Reflecto Letters 411 E 101 St New York 29 N Y (luminous & black plastic)
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Safe Padlock & Hardware Co Lancaster Pa
Slaymaker Lock Co 105 W End Av Lancaster Pa

INCINERATORS—garbage

The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Ewing Incinerator Co 5121 Ravenswood Av Chgo 40 Ill
Joseph Goder Incinerators 5121 N Ravenswood Chicago 40 Ill
Houston Blow Pipe & Sheet Metal Wks Box 1692 Houston Tex
Kerner Incinerator Div Morse Boulger Destruction Co 205 E 42nd New York 17 N Y
Majestic Co 303-C Erie St Huntington Ind
Pittsburgh Incinerator Co 131 Beam Way Pittsburgh 11 Pa

INSECTICIDES

Agkem Inc Div of Kalo Co Quincy Ill
The American Agricultural Chemical Co 50 Church New York 7 N Y
Armour & Co 1355 W 31st St Chicago Ill
The Barrett Div Allied Chemical & Dye Corp 40 Rector St New York 6 N Y
Camp Chemical Co Inc 2nd Av & 13th St Brooklyn 19 N Y
Carbola Chemical Co Inc Natural Bridge N Y
Carbolineum Wood Preserving Co Dept 12 528 W Holland Av Milwaukee 3 Wis
Chemical Supply Co 225 Plymouth Bldg Cleveland 15 Ohio
Coopers Creek Chemical Corp West Conshohocken Pa
Dianol Inc 4760 Freemont Terrace South St Petersburg Fla
The Dow Chemical Co Midland Mich
Gordon Chemical Co Inc 1700 Hickory St Kansas City 7 Mo
Harrop Chemical Co 135 Hoboken Av Jersey City 2 N J
Insecticides Paint Co Inc 318 S Washington St Peoria Ill
Monsanto Chemical Co 1700 S Second St Louis 4 Mo
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 22 Pa
Puritan Chemical Co 916-32 Ashby St N W Atlanta 3 Ga

INSERTS—concrete

Carpenter & Paterson Inc 1190 Bennington East Boston 28 Mass
Lakeside Malleable Casting Co Racine Wis
Richmond Screw Anchor Co Inc 816 Liberty Av Brooklyn 8 N Y
Star Expansion Products Co Inc 147 Cedar St NY 6 NY
Truscon Steel Co Youngstown 1 Ohio
Winner Industries 1023 Washington Av So Minneapolis 15 Minn

INSTRUMENTS—indicating, recording & controlling

Climatemaker Box 378 Bloomington Ill
Foxboro Co Foxboro Mass
Minneapolis Honeywell Reg Co Minneapolis Minn
Moore Dry Kiln Co 1220 W State St Jacksonville 1 Fla
Tagliabue Instruments Div Weston Electrical Instrument Corp 614 Frelinghuysen Av Newark 5 N J
Taylor Instrument Co Rochester 1 N Y

INSULATION—blanket or batt type

Armstrong Cork Co 4704 Ross St Lancaster Pa
Barrett Div Allied Chemical & Dye Corp 40 Rector NY 16 NY
Philip Carey Mfg Co Dept AL-4 Cincinnati 15 Ohio
The Carney Co Inc Mankato Minn
Celotex Corp 120 S La Salle Chgo 3 Ill (batt type only)
Certain-teed Prods Corp 120 E Lancaster Av Ardmore Pa
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
The Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Infra Insulation Inc Dept D 10 Murray St NY 7 NY
Johns-Manville Corp Box 290 22 E 40th NY 16 NY
The Kelly Lime & Transport Co 1121 Leader Bldg Cleveland 14 Ohio
Insulite Div Minnesota & Ontario Paper Co 500 Baker Arcade Bldg Minneapolis 2 Minn
Kimberly-Clark Corp Neenah Wis
Lockport Cotton Batting Co Lockport N Y
Masonite Corp Dept AL-47 P O Box 777 111 W Washington Chgo 2 Ill
National Cotton Council Dept L Memphis 1 Tenn
National Gypsum Co Buffalo N Y
Owens-Corning Fiberglas Corp Dept 64-D2 Toledo 1 Ohio
Plastergon Wall Board Co 196 Philadelphia Av Box 140 Sta B Buffalo 7 N Y
Riverton Lime & Stone Co Inc Riverton Va
Sealtite Insulation Mfg Corp Waukesha Wis
U S Gypsum Co 300 W Adams Chgo 6 Ill
U S Mineral Wool Co South Milwaukee Wis
Wood Conversion Co First Natl Bank Bldg Dept 120-42 St Paul 1 Minn

INSULATION—blowing wool

Barrett Div Allied Chemical & Dye Corp 40 Rector St New York 6 N Y
Philip Carey Mfg Co Dept AL-4 Cincinnati 15 Ohio
The Carney Co Inc Mankato Minn
Celotex Corp 120 S La Salle Chgo 3 Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Johns-Manville Corp Box 290 22 E 40th St New York 16 N Y
National Gypsum Co Buffalo 2 N Y
Owens-Corning Fiberglas Corp Dept 64-D2 Nicholas Bldg Toledo 1 Ohio
Pacific Lbr Co 35 E Wacker Dr Chicago 1 Ill
Pal-O-Pak Insulation Co Inc Hartland Wis
Riverton Lime & Stone Co Inc Riverton Va
Sealtite Insulation Mfg Corp Waukesha Wis
United States Gypsum Co 300 W Adams St Chicago 6 Ill
U S Mineral Wool Co South Milwaukee Wis
Wood Conversion Co Dept 120-42 First National Bank Bldg St Paul 1 Minn

INSULATION—board or sheet

Armstrong Cork Co 4704 Ocean Av Lancaster Pa
Celotex Corp 120 S La Salle Chgo 3 Ill
Certain-teed Prods Corp 120 E Lancaster Ardmore Pa
Fir-Tex Portland Ore
The Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Homasote Co Dept 50-A Trenton 2 N J
Insulite Div Minnesota & Ontario Paper Co 500 Baker Arcade Bldg Minneapolis 2 Minn

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Johns-Manville Corp Box 290 22 E 40th St New York 16 N
Keasbey & Mattison Co Ambler Pa
Kelley Island Lime & Transport Co 1122 Leader Bldg Cleveland 14 Ohio
National Gypsum Co Buffalo 2 N Y
Owens-Corning Fiberglas Corp Dept 64-D2 Nicholas Bldg Toledo 1 Ohio
Plastergon Wallboard Co P O Box 40 Sta B Buffalo 7 N Y
Reynolds Metals Co Bldg Products Section 2001 S Ninth St Louisville 1 Ky
Simpson Logging Co 1065 Stuart Bldg Seattle 1 Wash
U S Gypsum Co 300 W Adams Chgo 6 Ill
Wood Conversion Co Dept 120-42 First Natl Bank Bldg St Paul 1 Minn

INSULATION—glass (foam)

Armstrong Cork Co 4704 Ocean Av Lancaster Pa
Fiddes-Moore & Co 4950 State Line Av Hammond Ind
Pittsburgh Corning Corp Dept FF-42 307 Fourth Av Pittsburgh 22 Pa
Pittsburgh Plate Glass Co 2126 Grant Bldg Pittsburgh 19 Pa

INSULATION—loose fill

Barrett Div Allied Chemical & Dye Corp 40 Rector N Y 16 N Y
Philip Carey Mfg Co Dept AL-4 Cincinnati 15 Ohio
The Carney Co Inc Mankato Minn
Celotex Corp 120 S La Salle Chgo 3 Ill
Certain-teed Prods Corp 120 E Lancaster Ardmore Pa
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
The Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Insulite Div Minnesota & Ontario Paper Co 500 Baker Arcade Bldg Minneapolis 2 Minn
Johns-Manville Corp Box 290 22 E 40th NY 16 NY
Kelley Island Lime & Transport Co 1122 Leader Bldg Cleveland 14 Ohio
National Gypsum Co Buffalo 2 N Y
Owens-Corning Fiberglas Corp Dept 64-D2 Nicholas Bldg Toledo 1 Ohio
Pacific Lbr Co 35 E Wacker Dr Chicago 1 Ill
Pal-O-Pak Insulation Co Inc Hartland Wis
Riverton Lime & Stone Co Inc Riverton Va
F E Schundler & Co Inc 304 Railroad St Joliet Ill
U S Gypsum Co 300 W Adams Chgo 6 Ill
U S Mineral Wool Co South Milwaukee Wis
Western Mineral Products Co Milwaukee Wis
Zonolite Company 135 S LaSalle St Dept AL-42 Chicago Ill

INSULATION—reflective type

American Flange & Mfg Co Inc 30 Rockefeller Plaza NY 20 NY
Celotex Corp 120 S LaSalle Chgo 3 Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Gilman Bros Co Gilman 6 Conn
Infra Insulation Inc Dept D 10 Murray St NY 7 NY
Kimberly-Clark Corp Neenah Wis
Lockport Cotton Batting Co Lockport N Y
Protective Papers Inc Union Ill
Reynolds Metals Co Bldg Products Section 2002 S Ninth St Louisville 1 Ky
Richkraft Co 228 N La Salle Chicago 1 Ill
Samson Products Co 3219 W Armitage Chicago 47 Ill
Sealtite Insulation Mfg Corp Waukesha Wis
Silvercote Products Inc 161 E Erie Chgo 11 Ill
The Sisalkraft Co Dept AL-4 205 W Wacker Dr Chicago 6 Ill
United States Gypsum Co 300 W Adams St Chicago 6 Ill

INSULATION—spray-on

A P Green Fire Brick Co Mexico Mo
Minnesota Mining & Mfg Co St Paul 6 Minn
Sealtite Insulation Mfg Corp Waukesha Wis
Sprayo-Flake Insulation Co 2727 W Irving Pk Chicago Ill

INSURANCE

Central Mfrs' Mutual Insurance Co Van Wert Ohio
Employers Mutual Liability Insurance Co of Wis Wausau Wis
Indiana Lumbermens Mutual Insurance Co Indianapolis 9 Ind
Lumber Mutual Fire Ins Co 632 Beacon St Boston 15 Mass
Lumbermens Mutual Insurance Co Mansfield O
Lumbermens Mutual Casualty Co 4750 Sheridan Rd Chgo Ill
Lumbermen's Underwriting Alliance R A Long Bldg Kansas City 6 Mo
Northwestern Mutual Fire Association Seattle 1 Wash
Pennsylvania Lumbermen's Mutual Insurance Co Market St National Bank Bldg Philadelphia 7 Pa
U S Epperson Underwriting Co 1000 R A Long Bldg Kansas City 6 Mo

INTER-COMMUNICATION SYSTEMS

Executone Inc D-1 415 Lexington Av New York 17 N Y
Kellogg Switchboard & Supply Co 6650 S Cicero Chgo Ill
Select-O-Phone Co Div of Screw Mach Prod Co Inc 1012 Eddy Providence 5 R I
Talk-A-Phone Co 1512 S Pulaski Rd Chicago 23 Ill

IRONERS—electric

Armstrong Products Corp Huntington W Va
General Electric Co Schenectady 5 N Y
Hotpoint Inc 5600 W Taylor St Chicago 44 Ill
Landers Frary & Clark New Britain Conn
Westinghouse Electric Corp 306 Fourth Av Pittsburgh 30 Pa

IRONING BOARDS

Angel Novelty Co 340 Broad St Fitchburg Mass
Carr Adams & Collier Co Dubuque Ia
J R Clark Co Spring Park Minn
Davis Plywood Corp 12555 Berea Rd Cleveland 11 Ohio
L H Eubank & Son 433 W Redondo Blvd Inglewood Calif
Farley & Loetscher Mfg Co Dubuque Ia
Ideal Co Box 889 Waco Tex
Kinzua Pine Mills Co Kinzua Ore
Long-Bell Lbr Co PO Box 1097 Longview Wash & R A Long Bldg Kansas City Mo
Marquart Millwork Co Oshkosh Wis
Morgan Co Oshkosh Wis
Howard B Rich Inc P O Box 187 Carrollton Ky
Salmanson & Co Inc 1107 Broadway New York 10 N Y
Vimcar Sales Co 3001 E Pico Blvd Los Angeles 23 Cal
Western Pine Mfg Co Ltd P O Box 2207 Spokane 7 Wash

IRONS—soldering

Otto Bernz Co Inc 280 Lyell Av Rochester 6 N Y
Eagle Electric Mfg Co Inc 23-10 Bridge Plaza South Long Island City N Y
Electric Soldering Iron Co Inc Deep River Conn
Hexacon Electric Co 161 W Clay Av Roselle Park N J (electric)
Lenk Mfg Co 30-38 Cummington St Boston 15 Mass
Stanley Tools Div of Stanley Works 111 Elm St New Britain Conn
P Wall Mfg Co Grvoe City Pa

JACKS—adjustable wood-steel

Breyer Bros Whiting & Co Waupun Wis
Brainard Steel Co Dept F-4 Warren O
Clay Equipment Corp Cedar Falls Ia
M & M Wire Clamp Co 983-17th Av S E Minneapolis 14 Minn
Newark Ladder & Bracket Co Inc Clark (Rahway) N J
Patent Scaffolding Co Inc 1550 Dayton St Chicago Ill
Templeton Kenly & Co 1020 S Central Av Chicago 44 Ill
United Metal Products Inc 865 S High St Akron 11 Ohio

JACKS—house moving

American Skein & Fdry Co Racine Wis
John Berg Mfg Co 5319 LaSalle Chicago 9 Ill
Buda Co Harvey Ill
Joyce Cridland Co 2027 E 1st St Dayton 3 Ohio
Duff-Norton Mfg Co Pittsburgh Pa
N B Spurgeon Co 20 N Wacker Dr Chicago 6 Ill
Stimmel Winch Co 37-24 33rd Long Island City 1 N Y
A L Swett Iron Works Medina N Y
Templeton Kenly & Co 1020 S Central Av Chicago 44 Ill

JACKS—ladder

Breyer Bros Whiting & Co Waupun Wis
Davenport Ladder Co 2365 McKinley Av Davenport Iowa
Holland Ladder & Mfg Co Holland Mich
Holm's Mfg Co of Ohio 103 N Main St Akron 8 Ohio
Howard Mfg Co Kent Wash
Newark Ladder & Bracket Co Inc 3 Walnut Av Clark (Rahway) N J
Patent Scaffolding Co Inc 1550 Dayton St Chicago Ill
Ridgely Trimmer Co Springfield Ohio
The Sabin Machine Co 6536 Carnegie Av Cleveland 3 Ohio
Toledo Interlocking Products 335 Superior St Toledo 4 Ohio
John S Tilley Ladders Co Inc Watervliet N Y
Wagner Mfg Co Dept ALG-52 Cedar Falls Ia

JALOUSIES

Angel Novelty Co Fitchburg Mass
Fiwale Equipment Mfg Co 105 Reade St New York 13 N Y (hardware)
Ludman Corp Dept 2Y Box 4541 Miami Fla
Pacific Lbr Co 35 E Wacker Dr Chicago 1 Ill
The F C Russell Co 1100 Chester Av Dept 7-AL-42 Cleveland 1 Ohio (metal)

JOINTERS—saw

E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Boice Crane Co 930 W Central Av Toledo 6 Ohio
Hanchett Mfg Co Big Rapids Mich
Heston & Anderson Div St Paul Fdry & Mfg Co 606 W Kirkwood St Fairfield Ia
L Power & Company 2815 Oakford Philadelphia 46 Pa
Power Tool Div Rockwell Mfg Co 600 E Vienna Av Milwaukee 1 Wis
Powermatic Machine Co McMinnville Tenn
Prescott Co Menominee Mich
Shopmaster Inc 1214 S 3rd St Minneapolis 15 Minn
Stetson-Ross Machine Co Seatle 4 Wash
Yates-American Machine Co Beloit Wis

JOIST ANGLES

Allen Steel Products Inc 12911 Hillview Detroit 27 Mich
Copco Steel & Engineering Co 14035 Grand River Blvd Detroit 27 Mich
Duplex Hanger Co E 53rd & Lakeside Av Cleveland O
Gabriel Steel Co 13700 Sherwood Detroit 12 Mich
Ideal Hanger Co 1273 E 53rd St Cleveland 14 Ohio

KEY BLANKS

Clinton Lock Co Clinton Iowa
Corbin Cabinet Lock Div The American Hdwe Corp New Britain Conn
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Lockwood Hdwe Mfg Co Fitchburg Mass
Master Lock Co 2600 N 32nd Milwaukee 45 Wis
National Lock Co Rockford Ill
Norwalk Lock Co 395 Broadway New York 13 N Y
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Slaymaker Lock Co 105 W End Av Lancaster Pa
Technical Glass Co Inc 2050 E 48th St Los Angeles 11 Cal
Yale & Towne Mfg Co Stamford Conn

KITCHEN PLANNING

Better Homes Bureau Westinghouse Electric Corp Dept AL-452 PO Box 868 Pittsburgh 30 Pa

KNIFE SHARPENERS

Bridgeport Safety Emery Wheel Co Inc 550 Main St Stratford Conn
Dependable Machine Co Inc 2450 High Point Road Greensboro N C
Hanchett Mfg Co Big Rapids Mich
Simonds Abrasive Co Philadelphia 27 Pa

KNIVES—machine

American Knife Co Baldwinsville N Y
E C Atkins & Co 402 S Illinois Indianapolis 9 Ind
Ekstrom Carlson & Co 1400 Railroad Av Rockford Ill
Hanchett Mfg Co Big Rapids Mich
R Hoe & Co Inc 910 E 138th St New York 54 N Y
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Mitts & Merrill Saginaw Mich
Oliver Machinery Co Grand Rapids Mich
Simonds Saw & Steel Co Fitchburg Mass
Taylor-Stiles & Co Riegelsville N J
S A Woods Machine Co Boston 27 Mass

KNIVES—putty, linoleum, roofing

Black Panther Tool Co 401 N Broad St Philadelphia 8 Pa
Fastener Corp 862 Fletcher St Chicago 14 Ill
Glaziers' Tool Mfg Co 611 W Adams Chicago 6 Ill
Goldblatt Tool Co 1924 Walnut St Kansas City 8 Mo
Kler-Vue Knife Rack Co Inc 1776 Broadway New York 19 N Y
Lamson & Goodnow Mfg Co Shelburne Falls Mass
Macklanburg-Duncan Co Oklahoma City 1 Okla
Modern Specialties Co 4140 W Harrison St Chicago 24 Ill (roofing & insulation)
Murray-Black Co Springfield Ohio
Red Devil Tools Irvington 11 N J
Ridgely Trimmer Co Springfield Ohio
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
Tuck Mfg Co Brockton 39 Mass (linoleum only)
Warner Mfg Co 801 16th Av S E Minneapolis 14 Minn
Williams Products Co Inc 6127 Cedar Av Philadelphia 43 Pa

KNOBS—brass & bronze

Ajax Hardware Mfg Corp 4351 Valley Blvd Los Angeles 32 Cal
Akron Hdwe Mfg Corp 32-01 57th St Woodside N Y
American Brass Goods Co 158 Cottage Grove S W Grand Rapids 2 Mich
J Chesler & Sons Inc 41-49 Varick Av Brooklyn 37 N Y
P & F Corbin Div American Hardware Corp Park St New Britain Conn
Fiwale Equipment Mfg Co 105 Reade St NY 13 NY
Harloc Products Corp 25 Fox St New Haven Conn
H B Ives Co New Haven 8 Conn
Lockwood Hdwe Mfg Co Fitchburg Mass
McKinney Mfg Co 1400 Metropolitan St Pittsburgh 12 Pa
Natl Brass Co Grand Rapids Mich
National Hdwe Co 36-30 103rd Av Wdhvn NY NY
National Lock Co Rockford Ill
Peabody Co Inc 5816 Hooper Av Los Angeles Calif
Petko Industries Inc 1107 E 8th St Los Angeles 21 Cal
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Safe Padlock & Hdwe Co Lancaster Pa
Schlage Lock Co San Francisco 19 Calif
Slaymaker Lock Co 105 W End Av Lancaster Pa
Standard Bronze Co Bayonne 8 N J
The Stanley Wks New Britain Conn
Technical Glass Co Inc 2050 E 48th St Los Angeles 58 Cal
Westwood Mfg Co 1420 S Evergreen Av Los Angeles 23 Cal
Yale & Towne Mfg Co Stamford Conn

KNOBS—glass

Semon Bache & Co 636 Greenwich St New York 14 N Y
J Chesler & Sons Inc 41-49 Varick Av Brooklyn 37 N Y
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Lockwood Hdwe Mfg Co 35 Daniels St Fitchburg Mass
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Safe Padlock & Hdwe Co Lancaster Pa
Sager Lock Works North Chicago Ill
Slaymaker Lock Co 105 W End Av Lancaster Pa
Technical Glass Co Inc 2050 E 48th St Los Angeles 58 Calif
U S Glass Co Tiffin Ohio
Yale & Towne Mfg Co Stamford Conn

KNOBS—plastic

Chicago Wood & Plastic Plants Co 4201 W Irving Park Chicago 41 Ill
McDonald Mfg Co 544 E 31st St Los Angeles Cal
Natl Brass Co Grand Rapids Mich
Slaymaker Lock Co 105 W End Av Lancaster Pa
Superior Plastics Div Commonwealth Plastics Inc 426 N Oakley Blvd Chicago 12 Ill
U S Rubber Co 1230 Avenue of the Americas New York 20 N Y

KNOBS—wood

Chicago Wood & Plastic Plants Co 4201 W Irving Park Chicago 41 Ill
R F Cooke Mfg Co Orange Mass
Safe Padlock & Hardware Co Lancaster Pa
Slaymaker Lock Co 105 W End Av Lancaster Pa
H A Stiles Co 174 Portland St Boston 14 Mass
Waddell Mfg Co 1117 Taylor Av N W Grand Rapids 2 Mich

LACQUER

Acme White Lead & Color Wks 8250 St Aubin Av Detroit 11 Mich
American Marietta Co 43 E Ohio Chgo 11 Ill
American Varnish Co 1138 N No Branch St Chicago 22 Ill
Breinig Bros Inc Hoboken N J
Chicago Bronze & Color Works 2639 W Grand Av Chicago 12 Ill
Devoe & Raynolds Co Inc 787 First Av New York 17 N Y
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Empire Varnish Co 2636 E 76th St Cleveland 4 Ohio
Glidden Co Cleveland O
R F Johnston Paint Co 3925 Huston Av Cincinnati 12 Ohio
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
Lowe Bros Co Dayton 2 Ohio
Murphy Paint Div Interchemical Corp 231 Grant Av East Newark N J
Peaslee Gaulbert Paint & Varnish Co 223 N 15th St Louisville Ky
The Patterson Sargent Co 1325 E 38th St Cleveland 14 Ohio
Pittsburgh Plate Glass Co P O Box 551 Pittsburgh 22 Pa
Pratt & Lambert Inc 75 Tonawanda Buffalo 7 NY
Sewall Paint & Varnish Co 1306 River St Dallas 2 Tex
Sherwin-Williams Co Cleveland O
Standard Industrial Products Inc Box 325 Evansville 4 Ind
Standard Varnish Works 2600 Richmond Terrace Staten Island N Y
United States Plywood Corp Industrial Adhesives Div 55 W 44th St New York 18 N Y
Valentine & Co Inc 11 E 36th New York 16 N Y
Woodfinishing Products Co 34 Industrial St New York 61 N Y

LADDERS

American Ladder Co 5505 N W 7th Av Miami Fla
W W Babcock Co Inc Bath N Y
Bauer Mfg Co Wooster Ohio
John Berg Mfg Co 5319 S LaSalle Chgo 9 Ill
Breyer Bros Whiting & Co Waupun Wis
J R Clark Co Spring Park Minn
Davenport Ladder Co 2365 McKinley Av Davenport Ia
EZ-Way Sales Inc Div of Minnesota Wood Specialties Box 300 Dept L St Paul Park Minn
Goshen Churn & Ladder Co 1930 Estes Blvd Dept A Goshen Ind
Harry A Green & Son 1620 S Canal Chicago Ill
Heider Mfg Co Carroll Ia
Holland Ladder & Mfg Co Holland Mich
Howard Mfg Co Kent Wash & 2428 E 56th St Los Angeles 58 Cal
Louisville Metal Products Co Inc 1101 W Oak St Louisville 10 Ky (aluminum)
Michigan Ladder Co Ypsilanti Mich
Newark Ladder & Bracket Co Inc Clark (Rahway) N J
The Patent Scaffolding Co 1550 N Dayton Chicago 22 Ill
Howard B Rich Inc Box 187 Carrollton Ky
Rowe Mfg Co Dept AL Galesburg Ill
John S Tilley Ladders Co Inc Watervliet NY
Richbilt Mfg Co 3277 Spring Grove Av Cincinnati 25 Ohio
Topping Ladder Co Marion N Y
Zoss Ladder & Mfg Co Portland 1 Ore

LAMP POSTS

Liteway Mfg Corp Box 798 Middletown Conn
Sawhill Mfg Co Sharon Pa
Reflecto Letters Inc 411 E 101st St New York 29 N Y
Wm J Samcoe Iron Co 917 Military Rd Kenmore 17 N Y

LAMPS & LANTERNS

Cupples Co 401 57th St St Louis 2 Mo
Erco Mfg Co 2368 N Elston Av Chgo 14 Ill
Edwin F Guth Co St Louis 3 Mo
Faries Mfg Co Decatur Ill (lamps only)
Justrite Mfg Co 2061 N Southport Av Chgo 14 Ill
Liteway Mfg Corp Box 798 Middletown Conn
Mantle Lamp Co of America 223 W Jackson Blvd Chgo Ill
Moe Light Inc Fort Atkinson Wis
National Elec Fly Screen Co Inc 301-303 W 42nd St New York 18 N Y (insect killing)
Reflecto Letters Inc 411 E 101st St New York 29 N Y
Wm J Samcoe Iron Co 917 Military Rd Kenmore 17 N Y
The Stewart Iron Works Co Inc 1951 Stewart Block Cincinnati 1 Ohio (ornamental iron)

LATCHES—door

Acorn Mfg Co Mansfield Mass
Adams Rite Mfg Co 540 W Chevy Chase Dr Glendale 4 Cal
American Cabinet Hdwe Corp Dept 1-AP Rockford Ill
P & F Corbin American Hdwe Corp Park St New Britain Conn
Eagle Lock Co Terryville Conn
Engineered Products Co Flint 4 Mich
Frantz Mfg Co Sterling Ill
Griffin Mfg Co Erie Pa
Harloc Products Corp 25 Fox St New Haven Conn
Hollymade Hdwe Mfg Co 4865 Exposition Blvd Los Angeles 16 Cal
Ideal Brass Works Inc 250 E 5th St St Paul 1 Minn
H B Ives Co New Haven Conn
F D Kees Mfg Co Box 8 Beatrice Nebr
Laboratory Equipment Corp St Joseph Mich
Lawrence Bros Sterling Ill
Lockwood Hdwe Mfg Co 35 Daniels St Fitchburg Mass
McKinney Mfg Co Pittsburgh Pa
National Brass Co Grand Rapids Mich
National Lock Co Rockford Ill
National Mfg Co Sterling Ill
S Parker Hdwe Mfg Corp 27 Ludlow New York 2 N Y
Penn Hardware Co Reading Pa
Richards-Wilcox Mfg Co Aurora Ill
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Safe Padlock & Hdwe Co Lancaster Pa
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Segal Lock & Hdwe Co Inc 395 Broadway NY 13 NY
Sharon Hdwe Mfg Co Sharon Pa
Slaymaker Lock Co 105 W End Av Lancaster Pa
The Stanley Wks New Britain Conn
Technical Glass Co Inc 2050 E 48th St Los Angeles 58 Cal
Wagner Mfg Co Dept ALG-52 Cedar Falls Ia

LATCHES—gate

Clinton Lock Co Clinton Iowa
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Ideal Brass Works Inc 250 E 5th St St Paul 1 Minn
F D Kees Mfg Co Box 8 Beatrice Nebr
Lockwood Hdwe Mfg Co 35 Daniels St Fitchburg Mass
National Brass Co Grand Rapids Mich
National Mfg Co Sterling Ill
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Sharon Hardware Mfg Co Sharon Pa
Slaymaker Lock Co 105 W End Av Lancaster Pa
Standard Bronze Co Bayonne 8 N J
The Stanley Wks New Britain Conn

LATH—gypsum

Celotex Corp 120 LaSalle St Chicago 3 Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
National Gypsum Co Buffalo 2 N Y
Pabco Prods Inc 475 Brannan Av San Francisco 19 Calif
U S Gypsum Co 300 W Adams Chgo 6 Ill

LATH—insulating

Armstrong Cork Co 4704 Ocean Av Lancaster Pa
Celotex Corp 120 S LaSalle St Chicago 3 Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Fir-Tex Porter Bldg Portland 4 Ore
Insulite Div Minnesota & Ontario Paper Co 500 Baker Arcade Bldg Minneapolis 2 Minn
Johns-Manville Corp Box 290 22 E 40th NY NY
National Gypsum Co Buffalo 2 N Y

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10.

Plastergon Wall Board Co Box 40 Sta B Buffalo 7 N Y
U S Gypsum Co 300 W Adams Chgo 6 Ill
Wood Conversion Co Dept AL-42 1st National Bank Building St Paul Minn

LATH—metal

Alabama Lath Co Birmingham 1 Ala
The Bostwick Steel Lath 100 Heaton Av Co Niles O
Ceco Steel Products Corp 5601 W 26th St Chicago 50 Ill
Goldsmith Metal Lath Co Cincinnati 32 Ohio
Inland Steel Products Co (formerly Milcor Steel Co) 4027 W Burnham St Milwaukee 1 Wis
Keystone Steel & Wire Co Peoria 7 Ill
National Gypsum Co Buffalo 2 N Y
Penn Metal Co Inc 205 E 42nd St New York 17 N Y
Pittsburgh Steel Products Co Dept AL 3276 Grant Bldg Pittsburgh 30 Pa (paper-backed wire)
Republic Steel Corp Berger Mfg Div Canton 5 Ohio
Soule Steel Co PO Box 3510 Rincon Annex San Francisco 19 Cal
Truscon Steel Co Youngstown 1 O
U S Gypsum Co 300 W Adams Chgo 6 Ill
Wheeling Corrugating Co Wheeling W Va

LATH—wood (See lumber section beginning page 676

LATHES—woodworking

Bignell Machine Co 516 7th St N W Grand Rapids 4 Mich
Boice Crane Co 930 W Central Av Toledo 6 Ohio
Delta Power Tool Div Rockwell Mfg Co. 692 D E Vienna Av Milwaukee 1 Wis
Merritt-Monsanto Corp Lockport N Y (veneer)
Oliver Machinery Co Grand Rapids 2 Mich
Pringle & Brodie Machinery Co 566 W Polk St Chgo 7 Ill
Shopmaster Inc 1214 S 3rd St Minneapolis 15 Minn

LEAD—red

American Varnish Co 1138 N North Branch Chgo 22 Ill
Breinig Bros Inc Hoboken N J
Bruning Bros Inc 4209 E Chase St Baltimore 6 Md
The A Burdsal Co 206 S Capitol Indianapolis 9 Ind
The Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Hammond Lead Products Inc Hammond Ind
National Lead Co 111 Broadway NY NY
Pabco Prods Inc 475 Brannon St San Francisco 19 Cal
Sewall Paint & Varnish Co 1306 River St Dallas 2 Tex

LEAD—white

Acme White Lead & Color Wks 8250 St Aubin Av Detroit 11 Mich
American Varnish Co 1138 N North Branch Chgo 22 Ill
The A Burdsal Co 206 S Capital Indianapolis 7 Ind
The Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Felton Sibley & Co Inc 136 N 4th Philadelphia 6 Pa
Hoboken White Lead & Color Works 15th & Adams St Hoboken N J
Inland White Lead Co 741 W Gladys Av Chgo Ill
National Lead Co 111 Broadway NY NY
Sewall Paint & Varnish Co 1306 River St Dallas 2 Tex

LEVEL RODS—surveying

Chicago Steel Tape Co 7956 S Chicago Av Chgo 17 Ill
Eugene Dietzgen Co 2425 N Sheffield Chgo Ill
Goldblatt Tool Co 1924 Walnut St Kansas City 6 Mo
Keuffel & Esser Co Hoboken N J
L S Starrett Co Athol Mass
Warren-Knight Co 136 N 12th St Philadelphia 7 Pa

LEVELS—carpenter

Henry Disston & Sons Inc 425 Tacony Philadelphia 35 Pa
Empire Level Mfg Co Milwaukee Wis
Goldblatt Tool Co 1924 Walnut St Kansas City 6 Mo
Mayes Bros Tool Mfg Co Port Austin Mich
Millers Falls Co Greenfield Mass
Ox-Wall Tool Co 928 Broadway New York 10 N Y
Sands Level & Tool Co Clinton Indiana
Peerless Level & Tool Co Sterling Ill
Stanley Tools Div of Stanley Works 111 Elm St New Britain Conn
L S Starrett Co Athol Mass

LEVELS—surveyors

Eugene Dietzgen Co 2425 N Sheffield Chgo Ill
Goldblatt Tool Co 1924 Walnut St Kansas City 6 Mo
L S Starrett Co Athol Mass
Warren-Knight Co 136 N 12th St Philadelphia 7 Pa

LIFTS—sash

Ajax Hdwe Mfg Corp Dept 2A 4351 Valley Blvd Los Angeles 32 Cal
American Cabinet Hdwe Corp Dept AL-47 Rockford Ill
Clinton Lock Co Clinton Ia
P & F Corbin Div The American Hdwe Corp New Britain Conn
Fiwale Equipment Mfg Co 105 Reade St New York 13 N Y
Frantz Mfg Co Sterling Ill
Griffin Mfg Co Erie Pa
Ideal Brass Works Inc 250 E 5th St St Paul 1 Minn
H B Ives Co New Haven Conn
McKinney Mfg Co Pittsburgh Pa
National Brass Co Grand Rapids Mich
National Mfg Co Sterling Ill
Peabody Co Inc 5816 S Hooper Av Los Angeles 11 Cal
Penn Hdwe Corp Reading Pa
Russell & Erwin Div The American Hdwe Corp New Britain Conn
The Stanley Wks New Britain Conn

LIGHTING—fluorescent

Benjamin Electric Mfg Co Des Plaines Ill
Cupples Co 401 S 7th St St Louis 2 Mo
Curtis Lighting Inc 6135 W 65th Chgo 38 Ill
Eagle Electric Mfg Co Inc 23-10 Bridge Plaza So Long Island City 1 N Y
General Electric Co Schenectady 5 N Y
Edwin F Guth Co 2615 Washington Blvd St Louis 3 Mo
W H Long Co 425 N Clark Chgo Ill
Moe Light Inc Fort Atkinson Wis
Superior Plastics Div Commonwealth Plastics Inc 426 N Oakley Blvd Chgo 12 Ill
Westinghouse Electric Corp 306 Fourth Av Dept G10093-A Pittsburgh 30 Pa

LIGHTING FIXTURES

Associated Projects Co 80 E Long St Columbus 15 Ohio
Benjamin Electric Mfg Co Des Plaines Ill
Curtis Lighting Inc 6135 W 65th Chgo 38 Ill
Edwin F Guth Co 2615 Washington Blvd St Louis 3 Mo
F D Kees Mfg Co Box 8 Beatrice Nebr
Moe Light Inc Fort Atkinson Wis
Pryne & Co Inc 140 N Towne Av Pomona Calif
Superior Plastics Div Commonwealth Plastics Inc 426 N Oakley Blvd Chgo 12 Ill
Technical Glass Co Inc 2050 E 48th St Los Angeles 11 Cal
Westinghouse Electric Corp 306 Fourth Av Dept G10093-A Pittsburgh 30 Pa

LIGHTING SYSTEMS & EQUIPMENT

Benjamin Electric Mfg Co Des Plaines Ill
Delco Appliance Div Gen'l Motors Sales Corp Rochester N Y
Fairbanks Morse & Co 600 S Michigan Av Chgo Ill
General Electric Co Schenectady 5 N Y
Edwin F Guth Co 2615 Washington Blvd St Louis 3 Mo
Jacob Wind Elec Co Inc Minneapolis Minn
Kato Engineering Co Mankato Minn
Kohler Co Kohler Wis
Phelps Power & Light Co Rock Island Ill
Pioneer Gen-E-Motor Corporation 5841 W Dickens Chgo 39 Ill
Universal Motor Co 473 Universal Dr Oshkosh Wis
Wincharger Corp Sioux City Ia
Winpower Mfg Co Newton Iowa

LIGHTENING RODS

American Lightening Rod Co 917 "O" St Lincoln Neb
Burkett Lightning Rod Co Fremont Ohio
Electra Protection Co Inc 11 N Pearl St Albany 7 N Y
Independent Protection Co Inc Goshen Ind
Ohio Lightning Rod Co West Milton O
Robbins Lightning Protection Co Maryville Mo
West Dodd Lightning Conductor Corp 1457 W Norwood Chicago Ill

LIME—agricultural

The Carney Co Inc Mankato Minn (stone)
Henry Cowell Lime & Cement Co San Francisco Cal
Gibsonburg Lime Prods Co Gibsonburg O
Kelley Island Lime & Transport Co 1122 Leader Bldg Cleveland 14 Ohio
Louisville Cement Co 501 S 2nd St Louisville 2 Ky
Marblehead Lime Co 308 W Washington St Chicago 6 Ill
Mission Lime Products Corp 841 Ducommun St Los Angeles 12 Cal
National Gypsum Co Buffalo 2 N Y
National Lime & Stone Co Findlay O
National Mortar & Supply Co 1807 First National Bank Bldg Pittsburgh 22 Pa
Ohio Hydrate & Supply Co Woodville O
Riverton Lime & Stone Co Inc Riverton Va
Standard Lime & Stone Co Baltimore Md
U S Gypsum Co 300 W Adams Chgo 6 Ill
Washington Brick & Lime Co Box 2198 Spokane 8 Wash
Woodville Lime Prods Co Toledo O

LIME—finishing

Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Fairmont Wall Plaster Co Fairmont W Va
Gibsonburg Lime Prods Co Gibsonburg O
Kelley Island Lime & Transport Co 1122 Leader Bldg Cleveland 14 Ohio
Louisville Cement Co Inc Speed Bldg Louisville 2 Ky
Marblehead Lime Co 308 W Washington St Chicago 6 Ill
Mission Lime Prods Corp 841 Ducommun St Los Angeles 12 Calif
National Gypsum Co Buffalo 2 N Y
National Lime & Stone Co Findlay O
National Mortar & Supply Co 1807 First National Bank Bldg Pittsburgh 22 Pa
Ohio Hydrate & Supply Co Woodville O
United States Gypsum Co 300 W Adams Chgo 6 Ill
Washington Brick & Lime Co Box 2198 Spokane 8 Wash
Woodville Lime Prods Co Toledo O

LIME—masons hydrated

The Carney Co Inc Mankato Minn
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Gibsonburg Lime Prods Co Gibsonburg O
Kelley Island Lime & Transport Co 1122 Leader Bldg Cleveland 14 Ohio
Louisville Cement Co 501 S 2nd St Louisville 2 Ky
Marblehead Lime Co 308 W Washington St Chicago 6 Ill
Mission Lime Products Corp 841 Ducommun St Los Angeles 12 Cal
National Gypsum Co Buffalo 2 N Y
National Lime & Stone Co Findlay O
National Mortar & Supply Co 1807 First National Bank Bldg Pittsburgh 22 Pa
Ohio Hydrate & Supply Co Woodville O
Riverton Lime & Stone Co Inc Riverton Va
United States Gypsum Co 300 W Adams Chgo 6 Ill
Washington Brick & Lime Co Box 2198 Spokane 8 Wash
Woodville Lime Products Co Toledo O

LIME—pebble

Kelley Island Lime & Transport Co 1122 Leader Bldg Cleveland 14 Ohio
Louisville Cement Co Inc Speed Bldg Louisville 2 Ky
Marblehead Lime Co 308 W Washington St Chicago 6, Ill
Mission Lime Products Corp 841 Ducommun St Los Angeles 12 Calif
National Gypsum Co Buffalo 2 N Y
U S Gypsum Co 300 W Adams Chgo 6 Ill

LINING POLES—surveying

Chicago Steel Tape Co 7956 S Chicago Av Chgo 17 Ill
Eugene Dietzgen Co 2425 N Sheffield Av Chgo Ill
Kueffel & Esser Hoboken N J
Frederick Post Co 155 E Ohio Chgo Ill

LINOLEUM

Armstrong Cork Co 4704 Ocean Av Lancaster Pa
Bird & Son Inc Dept AL-4 East Walpole Mass
Congoleum-Nairn Inc Kearny N J
Pabco Products Inc 475 Brannan St San Francisco 19 Cal

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Sloane-Blabon Corp Dept AL 1-4 295 Fifth Ave New York 16 N Y

LINOLEUM BINDING

Kinkead Industries Inc 5860 N Pulaski Rd Chicago 30 Ill
Macklanburg-Duncan Co Oklahoma City 1 Okla
S & W Moulding Co 980 Parsons Av Columbus 6 Ohio
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
R D Werner Co Inc 295 Fifth Av New York 16 N Y

LINTELS—steel

Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Industrial Iron Works PO Box 4625 Portland 2 Ore
Steelcraft Mfg Co 9017 Blue Ash Rd Rossmoyne Ohio
Truscon Steel Co Youngstown 1 O
Vento Steel Prods Co, Inc 249 Colorado Av Buffalo 15 N Y

LOCKERS

All-Steel Equipment Co Aurora Ill
Curtis Cos Inc Clinton Ia
Lyon Metal Prod Inc Aurora Ill
Republic Steel Corp Berger Mfg Div Canton 5 Ohio
F P Smith Wire & Iron Wks 2340 Clybourn Av Chicago 40 Ill
Universal Steel Equipment Corp 135 W 23rd NY NY

LOCKS—door

Adams Rite Mfg Co 540 W Chevy Chase Dr Glendale 4 Cal
Arrow Lock Corp 762 Wythe Av Brooklyn 11 N Y
Bemis & Call Co Springfield Mass
J Chesler & Sons Inc 41 Varick Av Brooklyn 6 N Y
Clinton Lock Co Clinton Iowa
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Eagle Lock Co Terryville Conn
Harloc Products Corp 25 Fox St New Haven Conn
Hollymade Hardware Mfg Co 4865 Exposition Blvd Hollywood 16 Calif
LaBelle Industries Inc Oconomowoc Wis
Lockwood Hdwe Mfg Co 35 Daniels St Fitchburg Mass
National Lock Co Rockford Ill
Norwalk Lock Co 395 Broadway NY 13 NY
S Parker Hdwe Mfg Corp 27 Ludlow New York 2 N Y
Peabody Co Inc 5816 Hooper Av Los Angeles Calif (sliding door)
Peerless Mfg Co Inc 2100 N Reading St Reading Pa
Petko Industries Inc 1107 E 8th St Los Angeles 21 Cal
Penn Hdwe Co Reading Pa
Russell & Erwin Div The American Hdw Corp New Britain Conn
Safe Padlock & Hdwe Co Lancaster Pa
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Schlage Lock Co San Francisco 19 Cal
Skillman Hardware Mfg Co 530 Edgewood Av Trenton 4 N J
Slaymaker Lock Co 105 W End Av Lancaster Pa
Technical Glass Co Inc 2050 E 48th St Los Angeles 58 Calif
Vimcar Sales Co 3001 E Pico Blvd Los Angeles 23 Cal
Westwood Mfg Co 1420 S Evergreen Av Los Angeles 23 Calif
Yale & Towne Mfg Co Stamford Conn

LOCKS—sash

Ajax Hdwe Mfg Co Dept 2A 4351 Valley Blvd Los Angeles 32 Calif
American Cabinet Hdwe Corp Dept AL-47 Rockford Ill
Champion Hardware Co Geneva Ohio
Clinton Lock Co Clinton Iowa
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Frantz Mfg Co Sterling Ill
H B Ives Co New Haven Conn
Latch Lock Mfg Co St Paul 4 Minn (storm & screen)
Lockwood Hdwe Mfg Co 35 Daniels St Fitchburg Mass
Macklanburg-Duncan Co Oklahoma City 1 Okla
McKinney Mfg Co Pittsburgh Pa
National Brass Co Grand Rapids Mich
National Lock Co Rockford Ill
National Mfg Co Sterling Ill
Norwalk Lock Co 395 Broadway NY 13 NY
S Parker Hdwe Mfg Corp 27 Ludlow New York 2 N Y
Russell & Erwin Div The American Hdw Corp New Britain Conn
Safe Padlock & Hdwe Co Lancaster Pa
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Slaymaker Lock Co 105 W End Av Lancaster Pa
Vimcar Sales Co 3001 E Pico Blvd Los Angeles 23 Cal
Yale & Towne Mfg Co Hdwe Div Stamford Conn

LOCKS—tubular

Arrow Lock Corp 762 Wythe Av Brooklyn 11 N Y
J Chesler & Sons Inc 41 Varick Av Brooklyn 6 N Y
Clinton Lock Co Clinton Iowa
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Harloc Products Corp 25 Fox St New Haven Conn
Hollymade Hdwe Mfg Co 4865 Exposition Blvd Los Angeles 16 Calif
Lockwood Hardware Mfg Co 35 Daniels St Fitchburg Mass
National Brass Co Grand Rapids Mich
National Lock Co Rockford Ill
Norwalk Lock Co 395 Broadway New ork 13 N Y
S Parker Hdwe Mfg Corp 27 Ludlow New York 2 N Y
Russell & Erwin Div The American Hdw Corp New Britain Conn
Safe Padlock & Hdwe Co Lancaster Pa
Sager Lock Works North Chicago Ill
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Slaymaker Lock Co 105 W End Av Lancaster Pa
Technical Glass Co Inc 2050 E 48th St Los Angeles 58 Calif
Westwood Mfg Co 1420 S Evergreen Av Los Angeles 23 Calif
Yale & Towne Mfg Co Hdwe Div Stamford Conn

LOG CABIN SIDING

(See lumber section beginning 608)

LOG LOADERS

American Hoist & Derrick Co St Paul 1 Minn
Clyde Iron Works Inc Duluth 1 Minn
Cunningham Machinery Corp 735 Ricou St Shreveport La
Drott Mfg Corp Milwaukee 9 Wis
Taylor Machine Works Louisville Miss (combination loader & skidder)
Washington Iron Works Seattle 4 Wash
The Wheland Co Chattanooga 2 Tenn

LOUVERS—attic ventilating

Badger Corrugating Co La Crosse Wis
Ceco Steel Products Corp 5601 W 26th Chgo 50 Ill
Clay Equipment Corp Cedar Falls Iowa
Cornwall & Co 566 E 200th St Cleveland 19 Ohio
Curtis Cos Inc Clinton Ia
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Fordyce Lumber Co Fordyce Ark
Harris Inc 200 E Long St Columbus 15 Ohio
A D Hemphill Co 129 S Franklin Lake City Minn
Ideal Co Waco Texas
Inland Steel Prods Co 4027 W Burnham Milwaukee 1 Wis
Leslie Welding Co 2940 W Carroll Chgo 12 Ill
Metal Arts Mfg Co PO Box 4144 Atlanta 2 Ga
Midget Louver Co 6-8 Wall St Norwalk Conn
Morgan Sash & Door Co 2287 S Blue Island Av Chicago 8 Ill
Nichols Wire & Aluminum Co Davenport Ia
S Parker Hdwe Mfg Corp 27 Ludlow New York 2 N Y
N H Rudeen Co 2840 Fourth Ave South Minneapolis 8 Minn
Shepler Mfg Co 1312 Sheffield St Pittsburgh 33 Pa
U S Gypsum Co 300 W Adams Chicago 6 Ill
Vimcar Sales Co 3001 E Pico Blvd Los Angeles 23 Cal
Webb Mfg Co Box 499 Conneaut Ohio

LUMBER BUGGIES

Corley Mfg Co Chattanooga 1 Tenn
Cunningham Machinery Corp 735 Ricou St Shreveport La
Electric Wheel Co Quincy Ill
Hamilton Caster & Mfg Co Hamilton O
Hyster Co 2979 N E Clackamas St Portland 8 Ore

LUMBER CARRIERS

Drott Mfg Corp 3841 W Wisconsin Av Milwaukee 8 Wis
Gerlinger Carrier Co P O Box 338 Dallas Ore
Hyster Co 2979 N E Clackamas Portland 8 Ore & Peoria 1 Ill
Ross Carrier Co Benton Harbor Mich
Standard Forge & Axle Co Inc Box 898 Montgomery 2 Ala

LUMBER LIFTS

American Mfg Co Inc 2119 Pacific Av Tacoma 2 Wash
Drott Mfg Corp 3841 W Wisconsin Av Milwaukee 8 Wis
Hyster Co Portland 8 Ore & Peoria 1 Ill
Leitelt Iron Wks Grand Rapids 2 Mich (screw type)
Moore Dry Kiln Co 1220 W State St Jacksonville 1 Fla
Ross Carrier Co Benton Harbor Mich
Rotary Lift Co PO Box 2177 Memphis 1 Tenn
Silent Hoist & Crane Co Inc 860 63rd St Brooklyn 20 N Y
Standard Dry Kiln Co Indianapolis Ind

LUMBER PILERS

American Mfg Co Inc 2119 Pacific Av Tacoma 2 Wash
Bradney Machine Co Inc Middletown N Y
Johnson Mfg Co Inc Holly St & Duwamish River Seattle Wash
Stemm Bros Inc Leavenworth Wash

LUMBER TREATING

American Creosoting Co Inc Louisville Ky
American Lumber & Treating Co 332 S Michigan Av Chicago 4 Ill
Carbolineum Wood Preserving Co Dept 12 528 W Highland Av Milwaukee 1 Wis
Crosby Lbr & Mfg Co Crosby Miss
Fordyce Lumber Co Fordyce Ark
Fox Bros Mfg Co 2701 Sidney St St Louis 4 Mo
Frost Lumber Industries Inc Shreveport 90 La
Gulf States Creosoting Co Hattiesburg Miss
Gulfport Creosoting Co Gulfport Miss
International Creosoting & Construction Co Galveston Tex
Koppers Company Inc Wood Preserving Div Pittsburgh 19 Pa
The Long-Bell Lumber Co R A Long Bldg Kansas City 6 Mo & Longview Wash
T R Miller Mill Co Inc Brewton Ala
Pope & Talbot Inc Lbr Div Portland Ore
Protection Products Mfg Co 2305 Superior Kalamazoo 99 Mich
Protexol Corp 50 Market St Kenilworth 4 N J
Republic Creosoting Co Merchants Bank Bldg Indianapolis 4 Ind
Southwestern Creosoting Co Muskogee Okla
Taylor-Colquitt Co Spartanburg S C
Texas Creosoting Co Orange Tex
Weyerhaeuser Sales Co St Paul 1 Minn

MACHINERY—box & crate

Buss Machine Works 201 W 8th St Holland Mich
Chase Turbine Mfg Co Orange Mass
Handy Mfg Co 2440 W Lawrence Chicago 25 Ill
Hermance Machine Co 1st & Campbell Sts Williamsport Pa
Media Machine Works 632 Park Av Media Pa
Saranac Machine Co Benton Harbor Mich
Baxter D Whitley & Son Inc 15 Elm St Wnichendon Mass
S A Woods Machine Co Boston 27 Mass
Yates American Machine Co Beloit Wis

MACHINERY—excelsior making

Crescent Excelsior Machinery Co Indianapolis Ind
Indianapolis Excelsior Machinery Co Indianapolis Ind
Lewis T Kline Co Alpena Mich
Mitts & Merrill Saginaw Mich

MACHINERY—planing mill

American Mfg Co Inc 2119 Pacific Av Tacoma 2 Wash
American Saw Mill Machinery Co Hackettstown N J
Belsaw Machinery Co 315 Westport Rd Kansas City 2 Mo
Buss Machine Wks Holland Mich
Dependable Machine Co Inc 2350 High Point Rd Greensboro N C
Ekstrom Carlson & Co 1400 Railroad Av Rockford Ill
Hermance Machine Co 1st & Campbell Sts Williamsport Pa

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Mattison Mach Wks Rockford Ill
McDonough Mfg Co Eau Claire Wis
Newman Machine Co Greensboro N C
Oliver Machinery Co Grand Rapids 2 Mich
Powermatic Machine Co McMinnville Tenn
Stetson-Ross Mach Co Seattle 4 Wash
The R J Tower Iron Wks Greenville Mich
Vonnegut Moulder Corp Indianapolis Ind
Baxter D Whitney & Son Inc Winchendon Mass
S A Woods Machine Co Boston 27 Mass
Yates-American Mach Co Beloit Wis

MACHINERY—sawmill

Allis-Chalmers Mfg Co Milwaukee Wis
American Mfg Co Inc 2119 Pacific Av Tacoma 2 Wash
American Saw Mill Machinery Co Hackettstown N J
Belsaw Machinery Co 315 Westport Rd Kansas City 2 Mo
Corley Mfg Co Chattanooga Tenn
Corinth Machinery Co Corinth Miss
Cunningham Machinery Corp 735 Ricou St Shreveport La
DeWalt Inc 51 Fountain Av Lancaster Pa
Enterprise Co Columbiana Ohio
J A Fay & Egan Co 2022 Eastern Av Cincinnati 22 Ohio
The Filer & Stowell Co 147 E Becher St Milwaukee 7 Wis
R R Howell Co Minneapolis 14 Minn
Johnson Mfg Co Inc Fox Av & Holly St Seattle 8 Wash
Lane Mfg Co Montpelier Vt
McDonough Mfg Co EauClair Wis
Mitts & Merrill Saginaw Mich
D J Murray Mfg Co Wausau Wis
Prescott Co Menominee Mich
The R J Tower Iron Works Greenville Mich
Turner Mfg Co Statesville N C
Wheland Co Chattanooga 2 Tenn
S A Woods Machine Co Boston 27 Mass

MACHINERY—sawmill, portable

American Saw Mill Mchy Co Hackettstown N J
Belsaw Machinery Co 315 Westport Rd Kansas City 2 Mo
Chase Turbine Mfg Co Orange Mass
Corinth Machinery Co Corinth Miss
Corley Mfg Co Chattanooga 1 Tenn
Cunningham Machinery Corp 735 Ricou St Shreveport La
Enterprise Co Columbiana Ohio
A B Farquhar Co York Pa
Frick Co Dept 75 Waynesboro Pa
R R Howell Co Minneapolis 14 Minn
Kent Machine Co 115 Portage Trail Cuyahoga Falls O
Lane Mfg Co Montpelier Vt
The R J Tower Iron Wks Greenville Mich
Turner Mfg Co Statesville N C
Wheland Co Chattanooga 2 Tenn

MACHINERY—shingle

Chase Turbine Mfg Co Orange Mass
Lane Mfg Co Montpelier Vt
Prescott Co Menominee Mich

MACHINERY—veneer & plywood

American Mfg Co Inc 2119 Pacific Av Tacoma 2 Wash
Beach Mfg Co Montrose Pa
Black Bros Co Inc Mendota Ill
Chattanooga Machinery Co 1000 Watkins St Chattanooga 4 Tenn
Ekstrom Carlson & Co 1400 Railroad Av Rockford Ill
Hydraulic Press Mfg Co Mt Gilead O
Merritt-Monsanto Corp Lockport N Y
Mitts & Merrill Saginaw Mich
Oliver Machinery Co Grand Rapids Mich
Yates-American Machine Co Beloit Wis

MACHINERY—wood flour

Allis-Chalmers Mfg Co Milwaukee 1 Wis
American Mfg Co Inc 2119 Pacific Av Tacoma 2 Wash
Bauer Bros Co Springfield Ohio
C H & E Mfg Co 3849 N Palmer St Milwaukee 12 Wis
Williams Patent Crusher & Pulverizer Co St Louis Mo

MACHINERY—woodworking

Belsaw Machinery Co 315 Westport Rd Kansas City 2 Mo
Boice-Crane Co 930 W Central Av Toledo 6 Ohio
Buss Machine Wks Holland Mich
Chattanooga Mchy Co 1000 Watkins St Chattanooga 4 Tenn
Circo Tool Co Milwaukee 3 Wis
Consolidated Machinery & Supply Co Ltd 2031 Santa Fe Av Los Angeles 21 Cal
DeWalt Inc 51 Fountain Av Lancaster Pa
Defiance Mach Wks Defiance O
Delta Power Tool Div Rockwell Mfg Co 693-D E Vienna Ave Milwaukee 1 Wis
Dependable Machine Co Inc 2450 High Point Rd Greensboro N C
Ekstrom Carlson & Co 1417 Railroad Av Rockford Ill
J A Fay & Egan Co 2022 Eastern Av Cincinnati 22 Ohio
Greenlee Bros & Co 12th & Columbia Av Rockford Ill
Handy Mfg Co 2440 W Lawrence Chicago 25 Ill
Hermance Machine Co 1st & Campbell Sts Williamsport Pa
Heston & Anderson Div St Paul Fdry & Mfg Co 606 W Kirkwood St Fairfield Ia
Hutchinson Mfg Co Bridgeport Pa
Mattison Machine Works Rockford Ill
Media Machine Wks 632 Park Av Media Pa
McDonough Mfg Co Eau Claire Wis
Muskegon Machine Co Newburgh N Y
Newman Machine Co Greenbsoro N C
Oliver Machinery Co Grand Rapids 2 Mich
Onsrud Mach Wks Inc 3910 W Palmer Chgo Ill
Palmer Machinery Co Box 1 Jacksonville 1 Fla
Parks Woodworking Mach Co Cincinnati O
Porter-Cable Machine Co 1714 N Salina St Syracuse 8 N Y
Powermatic Machine Co McMinnville Tenn
Stetson-Ross Mach Co Seattle Wash
The Tannewitz Wks Grand Rapids 4 Mich
Turner Machinery Co 500 Beale St San Francisco 5 Cal
Vonnegut Moulder Corp Indianapolis 2 Ind
Walker Turner Div Kearney & Trecker Corp Plainfield N J
J D Wallace & Co 134 S California Av Chicago 12 Ill
Baxter D Whitney & Son Inc Winchendon Mass
S A Woods Machine Co Boston 27 Mass
Yates-American Mach Co Beloit Wis

MACHINES—floor waxing & polishing

American Floor Surfacing Machine Co 521 S St Clair St Toledo 3 Ohio
Atlas Floor Surfacing Mach Corp 248 E 34th NY 16 NY
Black Panther Tool Co 401 N Broad St Philadelphia Pa
Clarke Sanding Machine Co 464 Clay St Muskegon Mich
Fay Floor Mach Co 279 Fifth Av NY NY
Florboss-Habit Co 4181 W Montrose Chicago 41 Ill
Gen'l Floorcraft Inc 333 Sixth Av NY NY
Hild Floor Machine Co 740 W Washington Chicago 7 Ill
Hilger Co St Cloud Minn
Holt Mfg Co 651 20th St Oakland 12 Calif
Lincoln-Schlueter Floor Mchy Co 512 S Peoria Chicago Ill
Red Devil Tools Irvington 11 N J

MACHINES—unit lumber piling

American Mfg Co Inc Tacoma 2 Wash
Hyster Co Portland 8 Oregon & Peoria 1 Ill
Johnson Mfg Co Fox Av & Holly St Seattle 8 Wash
Moore Dry Kiln Co 1220 W State St Jacksonville 1 Fla
Ross Carrier Co Benton Harbor Mich

MAIL BOXES

Ajax Hdwe Mfg Co 4351 Valley Blvd Dept 2A Los Angeles 32 Calif
American Device Mfg Co Red Bud Ill (residence only)
American Sheet Metal Wks 331 N Alexander St New Orleans La (Rural)
Champion Hardware Co Geneva Ohio
Columbia Metal Box Co 260 E 143rd St NY 51 NY
Corbin Cabinet Lock Div The American Hdwe Corp New Britain Conn
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Fawsco Mfg Div Falls Stamping & Welding Co Cuyahoga Falls O
Inland Steel Prods Co 4027 W Burnham Milwaukee 1 Wis
H B Ives Co New Haven 8 Conn
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Leigh Building Products Div of Air-Control Products Inc Coopersville Mich
Mail Safe Mfg Co 436 N Smith Av St Paul 2 Minn
Majestic Co 303-C Erie St Huntington Ind
Northwest Metal Prods Inc 55 Spokane St Seattle 4 Wash (Rural)
Penn-Greg Mfg Co 7th St North & Bryant Minneapolis 11 Minn

MANTELS—wood

Cole Mfg Co P O Box 2657 Memphis 2 Tenn
Columbia Mfg Co 845 S 9th St Louisville 3 Ky
Curtis Cos Inc Clinton Ia
Marquart Millwork Co Oshkosh Wis
Morgan Co Oshkosh Wis
The Readybuilt Products Co 1705-23 McHenry Baltimore 23 Md

MASONS' SUPPLIES

Goldblatt Tool Co 1924 Walnut St Kansas City 8 Mo
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester N Y
Industrial Iron Wks PO Box 4625 Portland 2 Ore
Fayette R Plumb Inc Philadelphia 37 Pa
Stanley Tools New Britain Conn
Tennessee Line & Twine Co Elizabethton Tenn
United States Gypsum Co 300 W Adams Chgo 6 Ill
Western Foundry Co 2400 S W Water St Portland 1 Ore

MERCHANDISING EQUIPMENT

Multiplex Display Fixture Co 907-917 N 10th St St Louis Mo (swinging panels type for lumber samples & miscellaneous building materials)
Reflector Hardware Corp Dept AL-D 2245 S Western Av Chicago 8 Ill

MESH—wire

Ceco Steel Prods Corp 5601 W 26th St Chicago 50 Ill
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Keystone Steel & Wire Co Peoria Ill
Logan Co Inc Louisville 6 Ky
Northwestern Steel & Wire Co Sterling Ill
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Pittsburgh Steel Co Pittsburgh 30 Pa
Republic Steel Corp Cleveland 1 Ohio
Sheffield Steel Corp Sheffield Sta Kansas City Mo
F P Smith Wire & Iron Works Inc 2340 N Clybourn Av Chicago 14 Ill
Truscon Steel Co Youngstown 1 Ohio
Tennessee Coal Iron & RR Co U S Steel Corp Sub Box 2634 Birmingham 2 Ala
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp 500 Fifth Av NY 18 NY

METERS—feed water

The Bristol Co Waterbury 91 Conn
Neptune Meter Co 50 W 50th New York 20 N Y
Republic Flow Meters Co 2240 W Diversey Chgo Ill
Taylor Instrument Co Rochester 1 N Y

METERS—steam

The Bristol Co Waterbury 91 Conn
Brown Instrument Co 4419 Wayne Av Philadelphia 44 Pa
Republic Flow Meters Co 2240 W Diversey Chgo Ill
Taylor Instrument Co Rochester 1 N Y

MICROMETERS

Brown & Sharpe Mfg Co 235 Promenade St Providence 1 R I
The Lufkin Rule Co Saginaw Mich
Millers Falls Co Greenfield Mass
L S Starrett Co Athol Mass

MILLING IN TRANSIT

Corinth Planing Mill Co PO Box 829 Corinth Miss
Foshee Lumber Co Montgomery Ala
Grayson Lbr Co Birmingham Ala
Hallack & Howard Lumber Co Denver 1 Colo
Kinzua Pine Mills Co Kinzua Ore
Jas E Stark Co Memphis Tenn
Tacoma Lumber Fabricating Co Tacoma 1 Wash
Wallrich's Shawano Wis

MIRRORS—bathroom, kitchen

Semon Bache & Co 636 Greenwich NY 14 NY
Belknap Glass Co Seattle 1 Wash
Philip Carey Mfg Co Dept AL-4 Cincinnati 15 O

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Conant Bros Co Sommerville 44 Mass
Conroy-Prugh Glass Co 1430 Western Av NS Pittsburgh Pa
Copco Steel & Engineering Co 14035 Grand River Av Detroit 27 Mich
Curtis Cos Clinton Ia
Faries Mfg Co Decatur Ill
Dearborn Glass Co Dept RB 2402 W 21st St Chicago 8 Ill
The Hagemann Companies Inc 2145 Central Pkwy Cincinnati 14 Ohio
Libbey-Owens-Ford Glass Co 1642 Nicholas Bldg Toledo 3 Ohio
Miami Cabinet Div Philip Carey Mfg Co Middletown O
The Nurre Cos Inc Bloomington Ind
Chas Parker Co Meriden Conn
Pittsburgh Plate Glass Co 2126 Grant Bldg Pittsburgh 19 Pa
Safetee Glass Co Philadelphia 44 Pa
Toledo Plate & Window Glass Co 1041 Utica St Toledo 2 Ohio

MIRRORS—decorative

Art Mirror & Glass Specialty Co 4401 W Carroll Chicago Ill
Semon Bache & Co 636 Greenwich NY 14 NY
Belknap Glass Co Seattle 1 Wash
Century Mirror Corp 1521 W 35th Chgo Ill
Conroy-Prugh Glass Co 1430 Western Av NS Pittsburgh Pa
Dearborn Glass Co Dept RB 2402 W 21st Chicago 8 Ill
W P Fuller & Co 301 Mission San Francisco 19 Cal
The Hagemann Companies Inc 2145 Central Pkwy Cincinnati 14 Ohio
Libbey-Owens-Ford Glass Co 1642 Nicholas Bldg Toledo 3 Ohio
Miami Cabinet Div Philip Carey Mfg Co Middletown Ohio
The Nurre Cos Inc Bloomington Ind
Pittsburgh Plate Glass Co 2126 Grant Bldg Pittsburgh 19 Pa
Safetee Glass Co Philadelphia 44 Pa
Toledo Plate & Window Glass Co 1041 Utica Toledo 2 Ohio
Warren Co Inc 905 Memorial Dr S E Atlanta 1 Ga

MITER BOXES

American Crayon Co Sandusky Ohio (lock cornered)
Macklanburg-Duncan Co Oklahoma City 1 Okla
Markwell Mfg Co Inc 200 Hudson St New York 13 N Y
McGrath-St Paul Co 242 E Fifth St St Paul 1 Minn
Millers Falls Co Greenfield Mass
Walter E Selck & Co 225 W Hubbard Chicago 10 Ill
The Stanley Wks New Britain Conn

MIXERS—concrete, mortar, etc.

Barber-Greene Co Aurora Ill (bituminous)
Besser Mfg Co Alpena Mich
Chain Belt Co 1600 W Bruce St Milwaukee 4 Wis
Concrete Transport Mixer Co 4935 Fyler Av St Louis 9 Mo
Construction Machinery Co Waterloo Iowa
Fleming Mfg Co 4935 Fyler Av St Louis 9 Mo
Goldblatt Tool Co 1924 Walnut St Kansas City 6 Mo
Jaeger Machine Co 550 W Spring St Columbus O
Kent Machine Co 115 Portage Trail Cuyahoga Falls Ohio
Koehring Co 3026 W Concordia Av Milwaukee 10 Wis
Lansing Co Lansing Mich
Muller Machinery Co Inc Metuchen N J
Multiplex Machinery Corp Elmore Ohio
Northwest Metal Prods Inc 55 Spokane St Seattle 4 Wash
Ransome Machinery Co Sub of Worthington Pump & Machinery Corp Dunnellen N J
T L Smith Co Milwaukee Wis
Stearns Mfg Co Inc Adrian Mich

MODEL HOUSES—miniature

American Lumberman & Building Products Merchandiser 139 N Clark St Chicago 2 Ill (model house kits)
Architectural Model Materials Inc 4208 W Armitage Av Chicago 39 Ill
Home Planners Inc 11711 E 8 Mi Rd East Detroit 26 Mich
The Homes Center 720 Washington Av SE Minneapolis Minn
Tagliabue Instruments Div Weston Electrical Instrument Corp 614 Frelinghuysen Av Newark 5 N J

MOISTURE INDICATORS

American Instrument Co 8015 Georgia Av Silver Spring Md
L R Bradley & Co Dept 20 25 W 45th St New York 19 N Y
Colloid Equipment Co Inc 50 Church St New York 7 N Y
Kaydel Moisture Gauges 126 Liberty St Suite 207-209 New York 6 N Y
Measurements Corp Boonton N J
Moisture Register Co Dept A 133 N Garfield Alhambra Calif
Moore Dry Kiln Co 1220 W State St Jacksonville 1 Fla
Tagliabue Instruments Div Weston Electrical Instrument Corp 614 Frelinghuysen Av Newark 5 N J
Taylor Instrument Companies Rochester 1 N Y

MOPS—dust & polish

Boyle-Midway Inc 22 E 40th St New York 16 N Y
Cupples Co 401 S 7th St St Louis 7 Mo
Dustmaster Corp Minneapolis Minn
Hoffman Lion Mills Co Inc Fall River Mass
J I Holcomb Mfg Co Indianapolis 7 Ind
Howard Dustless Duster Co 80 Freeport St Dorchester 22 Mass
Illinois Duster & Brush Co 1944 Webster Av Chgo 14 Ill
Lasting Mop & Broom Co Evansville Ind
O-Cedar Corp 2246 W 49th Chgo 9 Ill
Rubon Woodfinishing & Products Co 500 W 7th St Kansas City 6 Mo
South Eastern Cordage NBC Bldg Cleveland 14 Ohio
Tu-Way Prod Co Detroit Mich
Wm D Whitaker Philadelphia 24 Pa

MOPS—roofing applicator

Algoma Mfg Co Algoma Wis
Cupples Co 401 S 7th St St Louis 2 Mo
Kirby Industries 1508 E Las Tunas San Gabriel Calif
South Eastern Cordage NBC Bldg Cleveland 14 Ohio

MORTAR—masonry

The Carney Co Inc Mankato Minn
Huron Portland Cement Co 1325 Ford Bldg Detroit 26 Mich
Louisville Cement Co 501 S 2nd St Louisville 2 Ky
National Mortar & Supply Co Pittsburgh Pa
U S Gypsum Co 300 W Adams St Chicago 6 Ill

MORTAR MIX

Adel Clay Prod Co Des Moines Ia
Colorcrete Industries Inc Holland Mich
Lehigh Sewer Pipe & Tile Co Ft Dodge Ia
Louisville Cement Co 501 S 2nd St Louisville 2 Ky
Ohio Hydrate & Supply Co Woodville O
Riverton Lime & Stone Co Inc Riverton Va
Washington Brick & Lime Co Spokane 6 Wash
What Cheer Clay Products Co What Cheer Iowa
X-Pando Corp 43-15 36th St Long Island City 1 N Y

MOTORS—electric

Allis-Chalmers Mfg Co Milwaukee Wis
Century Electric Co 1806 Pine St St Louis 3 Mo
Diehl Mfg Co 1124 Finderne Av Somerville N J
Emerson Elec Mfg Co 8100 Florissant Av St Louis 21 Mo
Fairbanks Morse & Co 600 S Michigan Av Chicago Ill
Fasco Industries Inc 212 Augusta St Rochester 2 N Y
General Electric Co Schenectady N Y
Hamilton Beach Co Div Scoville Mfg Co Racine Wis
Kingston-Conley Elec Co North Plainfield N J
Leland Elec Co Dayton O
Peerless Elec Co Warren Ohio
Robbins & Myers Co Springfield O
Russell Electric Co 4501 S Western Chicago 9 Ill
Signal Elec Mfg Co Menominee Mich
Wagner Electric Corp St Louis 14 Mo
Westinghouse Electric Corp Dept G 10093-A 306 Fourth Av Pittsburgh 30 Pa

MOULDINGS—metal

Aluminum Co of America 827-D Gulf Bldg Pittsburgh Pa
Ames Metal Moulding Co Inc 225 E 144th St New York 51 N Y
B & T Metals Co 425 W Town St Columbus 16 Ohio
Ceco Steel Products Corp 5601 W 26th St Chgo 50 Ill
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Chicago Metallic Sash Co 2112 Ogden Av Chicago 12 Ill
East Coast Tilebord Corp 41-59 Wyckoff Ave Brooklyn 27 N Y
Ford Metal Moulding Co 2701 Bridge Plaza North Long Island City N Y
Gibbs Boardtile Corp 636D N Aberdeen Chgo Ill
Herron-Zimmers Moulding Co Detroit Mich
Inland Steel Products Co (formerly Milcor Steel Co) 4027 W Burnham St Milwaukee 1 Wis
The Kawneer Co Niles Mich
Kinkead Industries Inc 5860 N Pulaski Rd Chicago 30 Ill
John Lees Div Serrick Corp Muncie Ind
Loxit Moulding Co 1217 W Washington Blvd Chicago 7 Ill
Lustrewood Process Co Div Frederick Raff Co P O Box 724 Bristol Conn
Macklanburg-Duncan Co Oklahoma City 1 Okla
Marsh Wall Products Inc Dept 441 Dover 1 Ohio
Metal Tile Products Inc 120 N Broadway Hastings Mich
Metal Trims Inc Box 1072 Youngstown 1 Ohio
Miratile Mfg Co Inc 600 W 81st St Chicago 20 Ill
National Aluminum Co 1133 Alum Creek Dr Columbus 9 Ohio
National Gypsum Co 325 Delaware Av Buffalo 2 N Y
Prestile Mfg Co 5850 W Ogden Chicago Ill
Pyramid Metals Co 1335 N Wells Chgo 10 Ill
Reynolds Metals Co Bldg Products Section 2002 S 9th St Louisville 1 Ky
Roxdale Building Products Corp Dept L-452 2916-18 White Plains Rd N Y 67 N Y
S & W Moulding Co 980 Parsons Av Columbus 6 Ohio
Samson Products Co 3219 Armitage Av Chicago 47 Ill
Walter E Selck & Co 225 W Hubbard Chicago 10 Ill
Superior Wall Products Co 4401 N American St Philadelphia 40 Pa
Trimedge Inc Youngstown Ohio
United Industries Inc 231 S LaSalle Chgo Ill
Wallace Mfg Co 10th & Fayette Kansas City Mo
R D Werner Co Inc Dept AL 295 Fifth Av New York 16 N Y
Wooster Products Inc Wooster Ohio
Yankee Fiber Tile Mfg Co 5035 Bellevue Av Detroit 11 Mich
Youngstown Manufacturing Inc Dept 1 66-76 S Prospect Youngstown 6 Ohio

MOULDINGS—plastic

Cass Prods Inc 6127 N Cicero Av Chicago 30 Ill
Herron-Zimmers Moulding Co Detroit Mich
Imperial Molded Products Corp 2935 Harrison St Chicago 12 Ill
Macklanburg-Duncan Co Oklahoma City 1 Okla
Prestile Mfg Co 5850 W Ogden Av Chicago 50 Ill
S & W Moulding Co 980 Parsons Av Columbus 6 Ohio
Superior Plastics Div Commonwealth Plastics Inc 414-430 N Oakley Blvd Chicago 12 Ill
Wallace Mfg Co 10th & Fayette Kansas City Mo

MOULDINGS—rubber

Cass Products Co 6127 N Cicero Av Chicago 30 Ill

MOULDINGS—wood

Aetna Plywood & Veneer Co 1731 N Elston Av Chicago 22 Ill
Arkansas Oak Flooring Co Pine Bluff Ark
Bel-Wood Mfg Co Ackerman Miss
Biles-Coleman Lbr Co Inc Omak Wash
Bradley Lumber Co of Arkansas Warren Ark
Burke Millwork Co Inc 3201 Fremont Av Seattle 3 Wash
Chicago Wood & Plastic Plants 4201 W Irving Pk Chicago 41 Ill
Curtis Companies Inc Clinton Ia
Farley & Loetscher Mfg Co Dubuque Ia
Fiddes Moore & Co 4950 State Line Av Hammond Ind
Firpine Products Co PO Box 188 Oswego Oregon
Fordyce Lumber Co Fordyce Ark
Frost Lumber Industries Inc Shreveport 90 La
Goshen Sash & Door Co Goshen Ind
W C Heller & Co Cat #40A 1050 Bryant St Montpelier O
Ideal Co Box 889 Waco Tex

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Keystone Frame & Mfg Co Spokane 3 Wash
Kinzua Pine Mills Co Kinzua Ore
The Long-Bell Lbr Co R A Long Bldg Kansas City 6 Mo & Longview Wash
Marquart Millwork Co Oshkosh Wis
Marsh Wall Products Inc Dept 441 Dover 1 Ohio
Mauk Seattle Lbr Co Skinner Bldg Seattle 1 Wash
The Mengel Co Inc Louisville 1 Ky
Mitchell Moulding Co 1501 Circle Av Forest Park Ill
Morgan Sash & Door Co 2287 S Blue Island Av Chicago 8 Ill
Nashotah Moulding & Mfg Co Nashotah Wis
Nickey Brothers Co Memphis Tenn
Northwest Door & Plywood Sales Tacoma 1 Wash
Oshkosh Wood Products Corp Oshkosh Wis
Pacific Lumber Co 35 E Wacker Dr Chicago Ill
Rock Island Millwork Co Rock Island Ill
Segelke & Kohlhaus Co La Crosse Wis
Seneca Lumber & Millwork Co 635-701 W Tiffin St Fostoria Ohio
Geo J Silbernagel 8 S Michigan Chgo Ill
Southern Pine Lumber Co Texarkana Tex
H A Stiles Co 174 Portland St Boston 14 Mass
U S Mengel Plywoods Inc Box 1612 Louisville 1 Ky
United States Plywood Corp Dept 615 55 W 44th St N Y 18 N Y
Washington Mfg Co PO Box 1544 Tacoma 1 Wash
Western Pine Mfg Co Ltd P O Box 2207 Spokane 7 Wash
Weyerhaeuser Sales Co St Paul 1 Minn
Willamette Valley Lbr Co Dallas Ore
Winter Bros Lbr Products Inc 212 S Marion St Oak Park Ill

MOWERS, LAWN— power, gasoline, electric

Bolens Products Div Port Washington Wis
Eclipse Lawn Mower Co Prophetstown Ill
Jacobsen Mfg Co Racine Wis
Reo Motors Inc Lansing 20 Mich
Pioneer Gen E Motor Corp 5841 W Dickens Chicago 39 Ill
Toro Mfg Corp Minneapolis 6 Minn
Monark Silver King Inc Chicago 35 Ill

NAIL PULLERS

Bridgeport Hardware Mfg Corp Bridgeport Conn
Crescent Tool Co Jamestown N Y
C Drew & Co Inc Maple St Kingston Mass
Union Hardware Co Torrington Conn
Woodings-Verona Tool Works Verona Pa

NAIL SETS, COUNTERSINKS

American Swiss File & Tool Co Elizabeth N J
Bridgeport Hdwe Mfg Corp Bridgeport Conn
Brown & Sharpe Mfg Co 235 Promenade St Providence 1 R I
Damascus Steel Prod Corp Rockford Ill
C Drew & Co Inc Kingston Mass
Independent Nail & Packing Co tion 2002 S 9th St Louisville 1 Ky
Millers Falls Co Greenfield Mass
Stanley Tools Div of Stanley Works 111 Elm St New Britain Conn
L S Starrett Co Athol Mass
Tuck Mfg Co Brockton 39 Mass (nail sets only)
Union Tool Co Orange Mass

NAILS

Alan Wood Steel Co Conshohocken Pa
American Steel & Wire Co U S Steel Corp Sub Rockefeller Bldg Cleveland 13 Ohio
Angell Nail & Chaplet Co Cleveland O
Atlas Tack Corp Fairhaven Mass
Bethlehem Steel Co Bethlehem Pa
Bostwick Steel Lath Co Niles Ohio (concrete)
Columbia Steel Co Russ Bldg San Francisco 6 Cal
Continental Steel Corp Kokomo Ind
Copperweld Steel Co Glassport Pa (copper covered steel)
E G Building Fasteners Corp 101 Park Av New York 17 N Y (locking or clinching)
Eastern Nail Co 50 Aleppo St Providence 9 R I
Illinois Nail Co 826 Peoria Chgo Ill
Independent Nail & Packing Co Bridgewater Mass
Keystone Steel & Wire Co Peoria Ill
Mid-States Steel & Wire Co Crawfordsville Ind
Nichols Wire & Aluminum Co Davenport Ia (steel & aluminum)
Northwestern Steel & Wire Co Sterling Ill
Pittsburgh Steel Co Pittsburgh Pa
Republic Steel Corp Cleveland 1 Ohio
Reynolds Metals Co Bldg Products Section 2000 S 9th St Louisville 1 Ky (aluminum)
Tennessee Coal Iron & RR Co U S Steel Corp Sub Birmingham Ala
Wash Co Inc 720 N Bowman Av Danville Ill (joint)
Wickwire Bros Inc Cortland N Y
Wickwore Spencer Steel Div Colorado Fuel & Iron Corp 500 Fifth Av New York 18 N Y
Wilson Steel & Wire Co W 49th and S Western Chgo Ill

NAILS—copper

American Steel & Wire Co Rockefeller Bldg 614 Superior Av N W Cleveland 13 Ohio
Angell Nail & Chaplet Co Cleveland O
Atlas Tack Corp Fairhaven Mass
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Columbia Steel Co Russ Bldg San Francisco 6 Cal
Continental Steel Corp Kokomo Ind
Copperweld Steel Co Glassport Pa (copper covered steel)
John Hassall Inc 154 Clay St Brooklyn 22 N Y
Independent Nail & Packing Co Bridgewater Mass
Steel & Wire Products Co Baltimore Md
Tennessee Coal Iron & RR U S Steel Corp Sub Birmingham Ala
Turner & Seymour Mfg Co Torrington Conn

NAILS—cut

Alan Wood Steel Co Conshohocken Pa
American Steel & Wire Co Rockefeller Bldg 614 Superior Av N W Cleveland 13 Ohio
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Clendenin Bros Inc 4309 Erdman Av Baltimore 13 Md
Continental Steel Corp Kokomo Ind
W H Maze Co Peru Ill
Republic Steel Corp Cleveland 1 Ohio
Tennessee Coal Iron & RR Co U S Steel Corp Sub Birmingham Ala
Wheeling Corrugating Co Wheeling W Va
Wheeling Steel Corp Wheeling West Virginia
Wickwire Bros Inc Cortland N Y

NAILS—flooring

Alan Wood Steel Co Conshohocken Pa
American Steel & Wire Co Rockefeller Bldg 614 Superior Av N W Cleveland 13 Ohio
Bethlehem Steel Co Bethlehem Pa
Continental Steel Corp Kokomo Ind
Independent Nail & Packing Co Bridgewater Mass
Kentile Inc 58 Second Av Brooklyn 15 N Y
Keystone Steel & Wire Co Peoria Ill
Northwestern Steel & Wire Co Sterling Ill
Pittsburgh Steel Co Pittsburgh 30 Pa
Republic Steel Corp Cleveland 1 Ohio
Tennessee Coal Iron & RR Co U S Steel Corp Sub Birmingham 2 Ala
Tremont Nail Co Wareham Mass
Wickwire Bros Inc Cortland N Y

NAILS—leadhead

Ceco Steel Prods Corp 5601 W 26th St Chicago 50 Ill
Columbia Steel Co Russ Bldg San Francisco 6 Cal
Continental Steel Corp Kokomo Ind
Deniston Co 49th & So Western Av Chicago 9 Ill
Dickson Weatherproof Nail Co Evanston Ill
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Independent Nail & Packing Co Bridgewater Mass
Keystone Steel & Wire Co Peoria Ill
WH Maze Co Peru Ill
Nichols Wire & Aluminum Co Davenport Ia
Republic Steel Corp Republic Bldg Cleveland 1 Ohio
Tennessee Coal & RR Co U S Steel Corp Sub Box 2634 Birmingham 2 Ala
Wheeling Corrugating Co Wheeling W Va

NAILS—masonry

Alan Wood Steel Co Box 112 Canshahackan Pa
American Steel & Wire Co Rockefeller Bldg 614 Superior Av N W Cleveland 13 Ohio
Badger Corrugating Co La Crosse Wis
Clendenin Bros Inc 4309 Erdman Ave Baltimore 13 Md
Colorado Fuel & Iron Corp Denver Colo
Continental Steel Corp Kokomo Ind
Dickson Weatherproof Nail Co Evanston Ill
Hillwood Mfg Co Cleveland 17 Ohio
Independent Nail & Packing Co Bridgewater Mass
Sheffield Steel Corp Sheffield Sta Kansas City Mo
Star Expansion Products Co Inc 147 Cedar St NY 6 NY
Tennessee Coal Iron RR Co U S Steel Corp Sub Box 2634 Birmingham 2 Ala
Tremont Nail Co Wareham Mass

NAILS—roofing, shingle

Alan Wood Steel Co Conshohocken Pa
American Steel & Wire Co Rockefeller Bldg 614 Superior Av N W Cleveland 13 Ohio
Atlas Tack Corp Fairhaven Mass
Bethlehem Steel Co Bethlehem Pa
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Clendenin Bros Inc 4309 Erdman Av Baltimore 13 Md
Colorado Fuel & Iron Corp Denver 1 Colo
Columbia Steel Co Russ Bldg San Francisco 6 Calif
Continental Steel Corp Kokomo Ind
Copperweld Steel Co Glassport Pa
Cupples Co 401 S 7th St St Louis 2 Mo
Deniston Co 49th & S Western Av Chicago 9 Ill (metal)
Dickson Weatherproof Nail Co Evanston Ill
E G Building Fasteners Corp 101 Park Ave New York 17 N Y (locking or clinching)
Independent Nail & Packing Co Bridgewater Mass
Jones & Laughlin Steel Corp Pittsburgh Pa
Keystone Steel & Wire Co Peoria Ill
W H Maze Co Peru Ill
Mid-States Steel & Wire Co Crawfordsville Ind
Nichols Wire & Aluminum Co Davenport Iowa (steel and aluminum)
Northwestern Steel & Wire Co Sterling Ill
Pittsburgh Steel Co Pittsburgh 30 Pa
Republic Steel Corp Republic Bldg Cleveland 1 Ohio
Reynolds Metals Co Bldg Prods Div 2002 S 9th St Louisville Ky
Sheffield Steel Corp Kansas City Mo
Tennessee Coal Iron & RR Co U S Steel Corp Sub Birmingham 2 Ala
Wickwire Bros Inc Cortland N Y
Wilson Steel & Wire Co 4840 S Western Av Chgo Ill

NAILS—screw type

Clendenin Bros Inc 4309 Erdman Av Baltimore 13 Md
Continental Steel Corp Kokomo Ind
Cupples Co 401 S 7th St St Louis 2 Mo (aluminum)
Deniston Co 49th & S Western Av Chicago 9 Ill (and pallet)
Dickson Weatherproof Nail Co Evanston Ill
E G Building Fasteners Corp 101 Park Av New York 17 N Y (Locking or Clinching)
John Hassall Inc 154 Clay St Brooklyn 22 N Y
Hillwood Mfg Co Cleveland 17 O
Independent Nail & Packing Co Bridgewater Mass
Nichols Wire & Aluminum Co Davenport Ia (aluminum)
Pittsburgh Steel Co Pittsburgh 30 Pa
Republic Steel Corp Republic Bldg Cleveland 1 Ohio
Stronghold Screw Products Inc 222 W Hubbard Chgo 10 Ill
Tennessee Coal Iron & RR Co U S Steel Corp Sub Birmingham Ala

NETTING—wire

American Steel & Wire Co Rockefeller Bldg 614 Superior Av N W Cleveland 13 Ohio
F P Smith Wire & Iron Wks 2340 Clybourn Av Chicago 40 Ill
Colorado Fuel & Iron Corp Wickwire Spencer Steel Div 500 Fifth Av New York 18 N Y
Columbia Steel Co Russ Bldg San Francisco 6 Cal
Continental Steel Corp Kokomo Ind
Gilbert & Bennett Mfg Co Blue Island Ill
Indiana Steel & Wire Co Muncie Ind
Keystone Steel & Wire Co Peoria 7 Ill

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Mid-States Steel & Wire Co Davenport Iowa
Northwestern Steel & Wire Co Sterling Ill
Republic Steel Corp Republic Bldg Cleveland 1 Ohio
Tennessee Coal Iron & RR Co U S Steel Corp Sub Birmingham 2 Ala
Wickwire Bros Inc Cortland N Y

NIPPERS

Champion-De Arment Tool Co Meadville Pa
Damascus Steel Prod Corp Rockford Ill
Goldblatt Tool Co 1924 Walnut St Kansas City 6 Mo
Lowe Mfg Co Enderlin N D
Peck Stow & Wilcox Co Southington Conn
Red Devil Tools Irvington 11 N J (glass)
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Starr Bros Bell Co East Hampton Conn
Vaughan & Bushnell Mfg Co 135 S La-Salle Chgo Ill

NOSING—metal stair

American Mason Safety Tread Co P O Box 310 Lowell Mass
Ames Metal Moulding Co Inc 225 E 144th St New York 51 N Y
B & T Metals Co 425 W Town St Columbus 16 Ohio
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Ford Metal Moulding Co 2701 Gridge Plaza North Long Island City N Y
Macklanburg-Duncan Co Oklahoma City Okla
Marsh Wall Products Inc Sub of Masonite Corp Dept 441 Dover Ohio
Goodloe E Moore Co Danville Ill
S & W Moulding Co 980 Parsons Av Columbus 6 Ohio
R D Werner Co Inc Dept AL 295 Fifth Av New York 16 N Y
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill

NOZZLES—hose

W D Allen Mfg Co 566 W Lake Chgo 6 Ill
Boston Woven Hose & Rubber Co Cambridge Mass
Elkhart Brass Mfg Co Inc Elkhart Ind
Johnson Mfg Co Inc Fox Av & Holly St Seattle 8 Wash
Melnor Metal Prods Co Inc 112 Lafayette St New York 13 N Y
D B Smith & Co 435 Main St Utica N Y

OFFICE MACHINES & SYSTEMS

Ajax Time Stamp Co 368 Broadway New York City N Y
Burroughs Adding Machine Co Detroit 32 Mich
Calculagraph Co Harrison N J
Delbridge Calculating Systems Inc 2502-10 Sutton Av St Louis 17 Mo
A B Dick Co 720 W Jackson Blvd Chicago 6 Ill
The Egry Register Co 429 E Monument Av Dayton 2 Ohio
Felt & Tarrant Mfg Co 1735 N Paulina Chgo Ill
Friden Calculating Machine Co Inc San Leandro Calif
Hamilton Autographic Register Co Hamilton Ohio
Marchant Calculating Machine Co Oakland Calif
Meilicke Systems Inc 3458-60 N Clark Chgo 13 Ill
Monroe Calculating Machine Co Inc Orange N J
Moore Business Forms Inc 900 Buffalo Av Niagara Falls N Y
The Mosler Safe Co Dept 64 32-Fifth Av N Y 1 N Y (insulated record containers)
National Cash Register Co Dayton Ohio
Remington Rand Inc 315 Fourth Av Business Machines & Supplies Div Rm 1266 New York 10 N Y
Ivan Sorvall Inc PP 45 210 Fifth Av New York 10 N Y
The Standard Register Co 3204 Campbell St Dept 1301 Dayton 1 Ohio
Todd Co Inc Rochester 3 N Y
Uarco Inc 5000 S California Av Chgo 32 Ill
Victor Adding Machine Co 3900 N Rockwell Chgo Ill

OIL—linseed

Archer-Daniels Idland Co 689 Roanoke Bldg Minneapolis 2 Minn
W P Fuller & Co 301 Mission San Francisco 19 Cal
Gordon Chemical Co Inc 1700 Hickory St Kansas City 3 Mo
National Lead Co 111 Broadway NY 6 NY
Sewall Paint & Varnish Co 1306 River St Dallas 2 Texas
Sherwin-Williams Co Cleveland O
Spencer Kellogg & Sons Inc Buffalo N Y
Technical Oil Div South Tex Cotton Oil Co Houston Tex

OUTDOOR FURNITURE

Beh & Co Inc 1150 Broadway NY 1 NY
Biles-Coleman Lumber Co Omak Wash
Bunting Glider Co 18th & Allegheny Av Philadelphia Pa
Connor Lumber & Land Co PO Box 112 Marshfield Wis
Frostbrand Furniture Mfg Co Shreveport La
Gold Medal Folding Furniture Co Racine Wis
Habitant Shops Inc Bay City Mich
Heywood-Wakefield Co Gardner Mass
Edward Hines Lumber Co 77 W Washington Chgo Ill
Ideal Mfg Co Warsaw Mo
Walter S Kraus Co 48-02 43rd St Woodside N Y
Long-Bell Lbr Co P O Box 1079 Longview Wash & R A Long Bldg Kansas City Mo
Nappanee Lumber & Mfg Co Nappanee Ind
Old Hickory Furniture Co Martinsville Ind
Salmanson & Co Inc 1107 Broadway New York 10 N Y
E A Vandy 14105 Merchandise Mart Chicago 54 Ill
Harry M Wolfe 666 Lake Shore Drive Chicago 11 Ill
Woodenware Products Corp 122 N 7th St St Louis 1 Mo

OVENS—electric drying

Colloid Equipment Co Inc 50 Church St NY 7 NY
Detroit Sheet Mtl Wks Detroit Mich
Moore Dry Kiln Co 1220 W State St Jacksonville Fla
Standard Dry Kiln Co 798 S Harding St Indianapolis Ind
Harold E Trent Co Philadelphia 27 Pa

OVENS—outdoor

The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Hancock Iron Wks Pontiac 14 Mich
Majestic Co 303-C Erie St Huntington Ind
Mexico Refractories Co Mexico Mo
Western Foundry Co Portland 1 Ore

PACKAGE RECEIVERS

Copco Steel & Engineering Co 14035 Grand River Av Detroit 27 Mich
Corbin Cabinet Lock Div The American Hdwe Corp New Britain Conn
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Excel Metal Cabinet Co Jamestown NY
Gabriel Steel Co Cat A 13700 Sherwood Detroit 12 Mich
Harris Inc 200 E Long St Columbus 15 Ohio
Leigh Building Products Div of Air Control Products Inc Coopersville Mich
Majestic Co 303-C Erie St Huntington Ind

PADLOCKS

Bemis & Call Co Springfield Mass
Chicago Lock Co 2024 Racine Av Chgo Ill
Corbin Cabinet Lock Div The American Hdwe Corp New Britain Conn
P & F Corbin Div The American Hdwe Corp New Britain Conn
Eagle-Lock Co Terryville Conn
Independent Lock Co 35 Daniels St Fitchburg Mass
Lockwood Hdwe Mfg Co 35 Daniels St Fitchburg Mass
Master Lock Company 2600 N 32nd St Milwaukee 10 Wis
J B Miller Keyless Lock Co Kent O
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Safe Padlock & Hdwe Co Lancaster Pa
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Slaymaker Lock Co 105 W End Av Lancaster Pa
Yale & Towne Mfg Co Stamford Conn

PAINT

Acme Quality Paints Inc 8250 St Aubin Av Detroit 11 Mich
Acme White Lead & Color Wks 8250 St Aubin Av Detroit 11 Mich
Adelphi Paint & Color Wks Inc 86-00 Dumont Av Ozone Park 17 N Y
Akron Paint & Varnish Co Akron 1 O
Aluminum Industries Inc 2438 Beekman Cincinnati 25 Ohio
American Marietta Co 43 E Ohio Chgo 11 Ill
American Varnish Co 1138 N No Branch St Chicago 22 Ill
Barreled Sunlight Paint Co Dept 19 Dudley & Eddy Sts Providence R I
Boston Varnish Co Boston Mass
Bradley & Vrooman Co 2629 S Dearborn Chgo 16 Ill
Breinig Bros Inc Hoboken N J
Bruning Bros Inc 4209 E Chase St Baltimore 6 Md
Samuel Cabot Inc 420 Oliver Bldg Boston 9 Mass
Calbar Paint & Varnish Co 2612 N Martha St Philadelphia 25 Pa
Carter Paint Co Liberty Ind
Chi-Namel Paint & Varnish Co Minneapolis Minn
Devoe & Raynolds Co Inc Dept A-5 787 First Av NY 17 NY
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Elliott Paint & Varnish Co 4525 Fifth Av Chgo 24 Ill
Forman Ford & Co 111 S 2nd Minneapolis 1 Minn
The Foy Paint Co Inc 1776 Mentor Av Cincinnati 12 Ohio
General Paint Corp 2627 Army St. San Francisco 19 Cal
Gillespie Varnish Co Dey & Howell Sts Jersey City 6 N J
Glidden Co Cleveland O
Grand Rapids Varnish Corp 1350 Steele Av S W Grand Rapids 2 Mich
Harrison Paint & Varnish Co 1329 Harrison Av SW Canton 1 Ohio
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
R F Johnston Paint Co 3925 Huston Av Cincinnati 12 Ohio
Keystone Varnish Co 71 Otsego St Brooklyn 31 N Y
Lowe Bros Co Dayton 2 Ohio
John Lucas & Co Philadelphia Pa
Minnesota Paints Inc 1101 3rd St So Minneapolis 15 Minn
Benj Moore & Co 511 Canal NY NY
Muralo Co Inc 566 Richmond Terrace Staten Island N Y
Murphy Paint Div Interchemical Corp 231 Grant Av Newark N J
National Gypsum Co Buffalo 2 N Y
National Lead Co 111 Broadway New York 6 N Y
The O'Brien Corp Dept L-4 South Bend 21 Ind
Sapolin Paints Inc 229 E 42nd St New York 17 N Y
Ira Parker & Sons Co Oshkosh Wis
Patterson-Sargent Co 1325 E 38th St Cleveland O
Peaslee-Gaulbert Paint & Varnish Co Inc Louisville Ky
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 19 Pa
Plasti-Kote Inc 425 Lakeside Av NW Cleveland 13 Ohio
Pratt & Lambert Inc 75 Tonawanda Buffalo 7 NY
Sargent-Gerke Co Indianapolis 6 Ind
Seidlitz Paint & Varnish Co 18th & Garfield Sts Kansas City Mo
Sewall Paint & Varnish Co 1306 River St Dallas 2 Tex
Sheffield Bronze Paint Corp 12405 Euclid Av Cleveland 19 Ohio
Sherwin-Williams Co Cleveland O
Standard Industrial Products Inc Box 115 Evansville 4 Ind
Standard Varnish Wks 2600 Richmond Terrace Staten Island 3 N Y
Steelcote Mfg Co 3418 Gratiot St Louis 3 Mo
Truscon Labs Detroit Mich
20th Century Paint & Varnish Corp 456 Driggs Av Brooklyn N Y
Valentine & Co Inc 11 E 36th St New York N Y
Vita-Var Corp 1180 Raymond Blvd Newark 2 N J
United States Plywood Corp Industrial Adhesives Div 55 W 44th St New York 18 N Y
Wesco Waterpaints Inc 5th & Grayson Sts Berkeley 10 Calif
Wilbur & Williams Co 130 Lincoln St Boston 35 Mass

PAINT—asphalt

Abesto Mfg Corp Dept D3 Michigan City Ind
Akron Paint & Varnish Co Akron 1 O
American Asphalt Roof Corp 7600 Truman Rd Kansas City 3 Mo
The Barrett Div Allied Chemical & Dye Corp 40 Rector St New York 6 N Y
Boston Varnish Co Boston 49 Mass
Breinig Bros Inc Hoboken N J
Calbar Paint & Varnish Co 2612-26 N Martha St Philadelphia 25 Pa

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Philip Carey Mfg Co Dept AL-4 Cincinnati 15 Ohio
Devoe & Raynolds Co Inc Dept A-5 787 1st Av NY 17 NY
E I duPont de Nemours & Co Inc Wilmington 98 Del
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Elliott Paint & Varnish Co 4525 W 5th Av Chgo 24 Ill
Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Forman Ford & Co 111 S 2nd St Minneapolis 1 Minn
The Foy Paint Co Inc 1776 Mentor Av Cincinnati 12 Ohio
The Gibson-Homans Co 2367 Woodhill Rd Cleveland 15 Ohio
Glidden Co Cleveland 2 Ohio
A C Horn Co Inc 10th St & 44th Av Long Island City N Y
Lowe Bros Co Dayton 2 Ohio
Murphy Paint Div Interchemical Corp 231 Grant Av East Newark N J
National Gypsum Co 325 Delaware Av Buffalo 2 NY
Ira Parker & Sons Co Oshkosh Wis
Peaslee Gaulbert Paint & Varnish Co 223 N 15th St Louisville Ky
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 22 Pa
Rogers Paint Products Inc 8250 St Aubin Av Detroit 11 Mich
The Ruberoid Co 500 Fifth Ave NY 18 New York
Seidlitz Paint & Varnish Co 18th & Garfield Kansas City Mo
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
20th Century Paint & Varnish Corp 456 Driggs Av Brooklyn N Y
United Gilsonite Laboratories Scranton 1 Pa
U S Gutta Percha Paint Co Dept 19 Dudley & Eddy Sts Providence 1 R I
Wilbur & Williams Co 43 Leon St Boston 15 Mass
Vita-Var Corp 46 Albert Av Newark N J

PAINT—barn and roof

Acme White Lead & Color Wks 8250 St Aubin Av Detroit 11 Mich
Akron Paint & Varnish Co Akron 1 Ohio
Aluminum Industries Inc 2438 Beekman Cincinnati 25 Ohio
American Varnish Co 1138 N No Branch St Chgo 22 Ill
Boston Varnish Co Boston 49 Mass
Bradley & Vrooman Co 2629 S Dearborn Chicago 16 Ill
Breinig Bros Inc Hoboken N J
Briggs-Maroney Co Inc 85 Paris St Everett 49 Mass
The A Burdsal Co 206 S Capitol Inidanapolis 9 Ind
Samuel Cabot Inc 420 Oliver Bldg Boston 9 Mass
Calbar Paint & Varnish Co 2612 N Martha St Philadelphia 25 Pa
Chi-Namel Paint & Varnish Co 1101 3rd St So Minneapolis 15 Minn
Devoe & Raynolds Co Inc Dept A-5 787 First Av New York 17 NY
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Elliott Paint & Varnish Co 4525 W Fifth Av Chicago 24 Ill
Empire Varnish Co 2636 E 76th St Cleveland 4 Ohio
The Foy Paint Co Inc 1776 Mentor Av Cincinnati 12 Ohio
W P Fuller & Co 301 Mission San Francisco 19 Cal
Glidden Co Cleveland O
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
R F Johnston Paint Co 3925 Huston Av Cincinnati 12 Ohio
Lowe Bros Co Dayton 2 Ohio
John Lucas & Co Phil Pa
John W Masury & Son Inc Baltimore 30 Md
Minnesota Paints Inc 1101 3rd St So Minneapolis 15 Minn
Benj Moore & Co 511 Canal NY NY
Murphy Paint Div Interchemical Corp 231 Grant Av East Newark N J
The O'Brien Corp Dept L-4 South Bend 21 Ind
Ira Parker & Sons Co Oshkosh Wis
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Patterson-Sargent Co 1325 E 38th St Cleveland 14 Ohio
Phelan-Faust Paint Mfg Co 932 Loughborough Av St Louis 11 Mo
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 22 Pa
Pratt & Lambert Inc 75 Tonawanda Buffalo 7 NY
Sargent-Gerke Co Inidanapolis 6 Ind
Seidlitz Paint & Varnish Co 18th & Garfield Kansas City Mo
Sherwin-Williams Co Cleveland O
Truscon Laboratories Inc Box 69 Milwaukee Junction PO Detroit 11 Mich
20th Century Paint & Varnish Corp 456 Driggs Av Brooklyn N Y
U S Gutta Percha Paint Co Dept 19 Dudley & Eddy Sts Providence 1 R I
Valentine & Co Inc 11 E 36th St New York N Y
Vita-Var Corp 46 Albert St Newark 2 N J
Wadsworth Howland & Co 141 Federal Boston Mass

PAINT—casein & cold water

Acme Quality Paints Inc 8250 St Aubin Av Detroit 11 Mich
Anti-Hydro Waterproofing Co 265 Badger Av Newark 8 N J (cold water only)
Samuel Cabot Inc 420 Oliver Bldg Boston 9 Mass
Chi-Namel Paint & Varnish Co 1101 3rd St So Minneapolis 15 Minn
Chicago Bronze & Color Wks 2639 W Grand Av Chicago 12 Ill
E I du Pont de Nemours & Co Inc Wilmington 98 Del
The Foy Paint Co Inc 1776 Mentor Av Cincinnati 12 Ohio
Glidden Co Cleveland O
A C Horn Co Inc 10th St & 44th Av Long Island City N Y
Minnesota Paints Inc 1101 3rd St So Minneapolis 15 Minn
Muralo Co Inc 572 Richmond Terrace Staten Island 1 NY
National Gypsum Co Buffalo 2 N Y
Ira Parker & Sons Co Oshkosh Wis
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 22 Pa
Phelan-Faust Paint Mfg Co 932 Loughborough Av St Louis 11 Mo
Reardon Co St Louis 6 Mo
Rogers Paint Products Inc 8250 St Aubin Av Detroit 11 Mich
The Sargent-Gerke Co Indianapolis 6 Ind
Seidlitz Paint & Varnish Co 18th & Garfield Sts Kansas City Mo
Sherwin-Williams Co Cleveland O
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill
U S Gypsum Co 300 W Adams Chgo 6 Ill
Vita-Var Corp 1180 Raymond Blvd Newark N J
Wesco Waterpaints Inc 5th & Grayson Sts Berkeley 10 Calif
The Wilbur & Williams Co 43 Leon St Boston 15 Mass

PAINT—cement, brick, concrete

Acme White Lead & Color Wks 8250 St Aubin Av Detroit 11 Mich
Adelphi Paint & Color Wks Inc 86-00 Dumont Av Ozone Park 17 N Y
Akron Paint & Varnish Co Akron 1 Ohio
American Fluresit Co Inc 4011 Red Bank Rd Cincinnati 27 Ohio
American Sta-Dri Co Brentwood Md
American Varnish Co 1138 N No Branch St Chgo 22 Ill
Anti-Hydro Waterproofing Co 265 Badger Av Newark 8 N J
Barreled Sunlight Paint Co Dept 19 Dudley & Eddy Sts Providence R I
Boston Varnish Co Boston 49 Mass
Briggs-Maroney Co Inc 85 Paris St Everett 49 Mass
Samuel Cabot Inc 420 Oliver Bldg Boston 9 Mass
Carter Paint Co Liberty Ind
Ceraseal Chemical Corp 2216 South St Lafayette Ind
Ceresit Waterproofing Corp 3227 S Shields Av Chicago 16 Ill
Chi-Namel Paint & Varnish Co Minneapolis Minn
Devoe & Raynolds Co Inc Dept A-5 787 1st Av N Y 17 N Y
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Elliott Paint & Varnish Co 4525 W Fifth Av Chicago 24 Ill
Empire Varnish Co 2636 E 76th St Cleveland 4 Ohio
Glidden Co Cleveland O
Haynes Products Co 4007 Farnam St Omaha 3 Nebr
A C Horn Co Inc 10th & 44th Av Long Island City N Y
R F Johnston Paint Co 3925 Huston Av Cincinnati 12 Ohio
Lowe Bros Co Dayton 2 Ohio
Medusa Portland Cement Co 1000 Midland Bldg Cleveland 15 Ohio
Benj Moore & Co 511 Canal NY NY
Muralo Co Inc 566 Richmond Terrace Staten Island N Y
Murphy Paint Div Interchemical Corp 231 Grant Av East Newark N J
National Gypsum Co Buffalo 2 N Y
Ohio Hydrate & Supply Co Woodville O
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
Patterson-Sargent Co 1325 E 38th St Cleveland 14 Ohio
Penn Crete Products Co 20th & Lippincott Sts Philadelphia 32 Pa
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 22 Pa
Plasti-Kote Inc 425 Lakeside Av N W Cleveland 13 Ohio
Pratt & Lambert Inc 75 Tonawanda St Buffalo 7 N Y
Prima Products Inc 10 E 40th St NY 16 NY
Reardon Co St Louis 6 Mo
Sapolin Paints Inc 229 E 42nd St New York 17 N Y
Seidlitz Paint & Varnish Co 18th & Garfield Kansas City Mo
Sherwin-Williams Co Cleveland O
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill
Toch Bros Inc 2600 Richmond Terr Staten Island 3 N Y
Truscon Labs Detroit Mich
Tuff-Kote Co Box 468 St Charles Ill
20th Century Paint & Varnish Corp 456 Driggs Av Brooklyn N Y
U S Gypsum Co 300 W Adams Chicago 6 Ill
Vita-Var Corp 1180 Raymond Blvd Newark N J
Wesco Waterpaints Inc 5th & Grayson Sts Berkeley 10 Cal
Wilbur & Williams Co 43 Leon St Boston 15 Mass
X-Pando Corp 43-15 36th St Long Island City 1 N Y

PAINT—dry kiln

Black Cat Corp Hattiesburg Miss
Breinig Bros Inc Hoboken N J
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
Lowe Bros Co Dayton 2 Ohio
Moore Dry Kiln Co 1220 W State St Jacksonville 1 Fla
Murphy Paint Div Interchemical Corp 231 Grant Av East Newark N J
Ira Parker & Sons Co Oshkosh Wis
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 22 Pa
Wilbur & Williams Co 43 Leon St Boston 15 Mass

PAINT—lead

Acme White Lead & Color Wks 8250 St Aubin Av Detroit 11 Mich
Adelphi Paint & Color Wks Inc 86-00 Dumont Av Ozone Park 17 N Y
American Marietta Co 43 E Ohio Chgo 11 Ill
American Varnish Co 1138 N No Branch St Chgo 22 Ill
Boston Varnish Co Boston 49 Mass
Breinig Bros Inc Hoboken N J
Chi-Namel Paint & Varnish Co Minneapolis Minn
Devoe & Raynolds Co Inc Dept A-5 787 1st Av N Y 17 N Y
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Elliott Paint & Varnish Co 4525 W Fifth Av Chicago 24 Ill
Foy Paint Co Inc 1776 Mentor Av Cincinnati 12 Ohio
W P Fuller & Co 301 Mission San Francisco 19 Cal
Glidden Co Cleveland O
Hoboken White Lead & Color Works 15th & Adams St Hoboken N J
A C Horn Co 43-42 Tenth Long Island City 1 NY
Inland White Lead Co 741 W Gladys Chgo Ill
Lowe Bros Co Dayton 2 Ohio
Murphy Paint Div Interchemical Corp 231 Grant Av East Newark N J
Natl Lead Co 111 Broadway NY NY
The O'Brien Corp Dept L-4 South Bend 21 Ind
Ira Parker & Sons Co Oshkosh Wis
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 22 Pa
Pratt & Lambert Inc 75 Tonawanda St Buffalo 7 N Y
Sapolin Paints Inc 229 E 42nd St New York 17 N Y
Seidlitz Paint & Varnish Co 18th & Garfield Sts Kansas City Mo
Sherwin-Williams Co Cleveland O
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Toch Bros Inc 2600 Richmond Terr Staten Island 3 N Y
20th Century Paint & Varnish Corp 456 Driggs Av Brooklyn N Y

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Valentine & Co Inc 11 E 36th St New York N Y
Vita-Var Corp 1180 Raymond Blvd Newark 2 N J

PAINT—lumber end sealing

The Akron Paint & Varnish Co 1390 Firestone Parkway Akron 1 Ohio
Black Cat Corp Hattiesburg Miss
Breinig Bros Inc Hoboken N J
Bruning Bros Inc 4209 E Chase St Baltimore 6 Md
Carbolineum Wood Preserving Co Dept 12 528 W Highland Av Milwaukee 3 Wis
Forman Ford & Co 111 S Second St Minneapolis 1 Minn
Lowe Bros Co Dayton 2 Ohio
Minnesota Linseed Oil Paint Co Minneapolis Minn
Moore Dry Kiln Co 1220 W State St Jacksonville 1 Fla
The O'Brien Corp Dept L-4 South Bend 21 Ind
Ira Parker & Sons Co Oshkosh Wis
Pratt & Lambert Inc 75 Tonawanda St Buffalo 7 N Y
Toch Bros Inc 2600 Richmond Terr Staten Island 3 N Y

PAINT—metallic

Acme Quality Paints Inc 8250 St Aubin Av Detroit 11 Mich
Adelphi Paint & Color Wks Inc 86-00 Dumont Av Ozone Park 17 N Y
Akron Paint & Varnish Co Akron 1 Ohio
Aluminum Industries Inc 2438 Beekman Cincinnati 25 Ohio
American Varnish Co 1138 N No Branch St Chgo 22 Ill
Breinig Bros Inc Hoboken N J
Barreled Sunlight Paint Co Dept 19 Dudley & Eddy Sts Providence R I
Carter Paint Co Liberty Ind
Chi-Namel Paint & Varnish Co 1101 3rd St So Minneapolis 15 Minn
Devoe & Raynolds Co Inc Dept A-5 787 1st Av N Y 17 N Y
E I du Pont de Nemours & Co Inc Wilmington 98 Del
The Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Elliott Paint & Varnish Co 4525 W Fifth Av Chicago 24 Ill
Empire Varnish Co 2636 E 76th St Cleveland 4 Ohio
Felton Sibley & Co Inc 136 N 4th St Philadelphia 6 Pa
Forman Ford & Co 111 S 2nd St Minneapolis 1 Minn
Glidden Co Cleveland O
Lowe Bros Co Dayton 2 Ohio
Minnesota Paints Inc 1101 3rd St So Minneapolis 15 Minn
Murphy Paint Div Interchemical Corp 231 Grant Av East Newark N J
Ira Parker & Sons Co Oshkosh Wis
Phelan-Faust Paint Mfg Co 932 Loughborough Av St Louis 11 Mo
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 22 Pa
Pratt & Lambert Inc 75 Tonawanda St Buffalo 7 N Y
Reynolds Metals Co Bldg Products Section 2002 S Ninth St Louisville 1 Ky
Sapolin Paints Inc 229 E 42nd St New York 17 N Y
The Sargent-Gerke Co Indianapolis 6 Ind
Siedlitz Paint & Varnish Co 18th & Garfield Kansas City Mo
Sherwin-Williams Co Cleveland O
Sheffield Bronze Paint Corp 12405 Euclid Av Cleveland 19 Ohio
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Standard Industrial Products Inc Box 325 Evansville 4 Ind
Toch Bros Inc 2600 Richmond Terr Staten Island 3 N Y
United Gilsonite Laboratories Scranton 1 Pa
Valentine & Co Inc 11 E 36th St New York N Y
Wilbur & Williams Co 43 Leon St Boston 15 Mass
Vita-Var Corp 1180 Raymond Blvd Newark 2 N J

PAINT— rubber base

Acme Quality Paints Inc 8250 St Aubin Av Detroit 11 Mich
Acorn Refining Co 8001 Franklin Blvd Cleveland O
Adelphi Paint & Color Wks Inc 86-00 Dumont Av Ozone Park 17 N Y
Carter Paint Co Liberty Ind
Chicago Bronze & Color Wks 2639 W Grand Av Chicago 12 Ill
Chi-Namel Paint & Varnish Co Minneapolis Minn
Excelsior Varnish Works Inc 1218 W 74th St Cleveland 2 Ohio
Gen Paint Corp 2627 Army St 3474 Rincon Annex San Francisco 19 Cal
Gillespie Varnish Co Dey & Howell Sts Jersey City 6 N J
Haynes Products Co 4007 Farnam St Omaha 3 Nebr
G J Liebich Co 931 N Ogden Chicago 22 Ill
Medusa Portland Cement Co 1000 Midland Bldg Cleveland 15 Ohio
Minnesota Paints Inc Minneapolis Minn
Peaslee Gaulbert Paint & Varnish Co 223 N 15th St Louisville Ky
Pioneer Mfg Co 3053 E 87th St Cleveland O
Robeson Preservo Co 208-C Merchant St Port Huron Mich
Sapolin Paints Inc 229 E 42nd St New York 17 N Y
Steelcote Mfg Co 3418 Gratiot St Louis 3 Mo
Toch Bros Inc 2600 Richmond Terr Staten Island 3 N Y
Vita-Var Corp 1180 Raymond Blvd Newark N J
Wesco Waterpaints Inc 5th & Grayson Sts Berkeley 10 Calif
Wilbur & Williams Co 130 Lincoln St Boston 35 Mass

PAINT AGITATORS

Fanner Mfg Co Cleveland O
Harbil Mfg Co 325 W Ohio Chgo 10 Ill
Miller Mfg Co 9425 W Seymour Schiller Park Ill
Miracle Paint Rejuvenator Co St Paul 1 Minn
Paasche Airbrush Co 1909 W Diversey Chgo Ill
Red Devil Tools Irvington 11 N J
Tamms Industries Inc 228 N LaSalle St Chicago 1 Ill
Woodfinishing Products Co 34 Industrial St Bronx 61 N Y

PAINT ROLLERS

A B Carlson & Co 349 Woodlawn Av Aurora 9 Ill
Colorcrete Industries Inc Holland Mich
Electric Sprayit Co Sheboygan Wis
Fond du Lac Roller Corp PO Box 551 Fond du Lac Wis
Glidden Co Cleveland 2 Ohio
Red Devil Tools Irvington N J
Rubberset Co Hayes Av & Lincoln Highway Newark 5 N J
Thomas Products Co 8490 Lyndon Ave Detroit 21 Mich
Wooster Brush Co Wooster O

PAINT remover

Acorn Refining Co 8001 Franklin Blvd Cleveland O
American Varnish Co 1138 N North Branch Chgo 22 Ill
Boston Varnish Co Boston 49 Mass
Bruning Bros Inc 4209 E Chase St Baltimore 6 Md
Chi-Namel Paint & Varnish Co 1101 3rd St So Minneapolis 15 Minn
Devoe & Raynolds Co Inc Dept A-5 787 First Av New York 17 N Y
E I du Pont de Nemours & Co Inc Wilmington 98 Del
W P Fuller & Co 301 Mission San Francisco 19 Cal
Glidden Co Cleveland O
Lowe Bros Co Dayton 2 Ohio
Minnesota Paints Inc 1101 3rd St So Minneapolis 15 Minn
Murphy Paint Div Interchemical Corp 231 Grant Av East Newark N J
Oakite Products Inc 22 Thames St New York 6 N Y
The Patterson-Sargent Co 1325 E 38th St Cleveland 14 Ohio
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 22 Pa
The Savogran Co 25 Huntington Av Boston 16 Mass
Schaik Chemical Co 351 E Second St Los Angeles 12 Calif
Seidlitz Paint & Varnish Co 18th & Garfield Sts Kansas City Mo
Tamms Industries Inc 228 N LaSalle St Chicago 1 Ill
Truscon Laboratories Inc Box 69 Milwaukee Junction PO Detroit 11 Mich
Valentine & Co Inc 11 E 36th St New York N Y
Vita-Var Corp 1180 Raymond Blvd Newark 2 N J
Wilson Imperial Company 115 Chestnut St Newark N J
Woodfinishing Products Co 34 Industrial St New York 61 N Y

PAINT SPRAYERS

Binks Mfg Co 3124 Carroll Av Chicago 12 Ill
Burgess Vibrocrafters Inc 180 N Wabash Chicago Ill
DeVilbiss Co Toledo 1 Ohio
Electric Sprayit Co 1415 Illinois Av Sheboygan Wis
Empire Varnish Co 2636 E 76th St Cleveland 4 Ohio
H D Hudson Mfg Co 589 E Illinois St Chicago Ill
Lowell Mfg Co Dept 62 589 E Illinois St Chicago Ill
Paasche Airbrush Co 1909 W Diversey Chicago Ill
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 22 Pa
Portable Electric Tools Inc 335 W 83rd St Chgo 20 Ill
Stewart-Warner Corp 1828 Diversey Pkwy Chicago 14 Ill

PAINTERS DROP CLOTHS

American Tent & Awning Co 1132 Mission St San Francisco 3 Cal
Clifton Mfg Co 331 Pleasant St Waco Tex
Fulton Bag & Cotton Mills Atlanta 1 Ga
Sewall Paint & Varnish Co 1306 River St Dallas 2 Tex
Standard Awning Co 83 Avon St Hartford 5 Conn
Werner Canvas Products Co 609 Bergen St Brooklyn 17 N Y

PAINTERS' SUPPLIES

The Bengal Co 214 St Nicholas Av New York 27 N Y
Devoe & Raynolds Co Inc Dept A-5 787 First Av New York 17 N Y
Felton Sibley & Co Inc 136 N 4th St Philadelphia 6 Pa
Harbil Mfg Co Inc 325 W Ohio Chgo 10 Ill
Holley Chemical Co 122 E 25th St New York 10 N Y (deodorant)
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 22 Pa
Red Devil Tools Irvington 11 N J
Seidlitz Paint & Varnish Co 18th & Garfield Kansas City Mo
Sewall Paint & Varnish Co 1306 River St Dallas Tex
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Stencil Specialty Co 388 Ocean Av Jersey City N J

PALLETS—wooden

Air-King Mfg Corp Tigard Ore
Carr & Moehl Co Des Moines 9 Iowa
Evans Products Co Dept S-14 Plymouth Mich
Northwest Door & Plywood Sales Tacoma 1 Wash

PAPER—asbestos

Acme Asbestos Covering & Flooring Co 246 N Elizabeth Chgo 7 Ill
Curtis Mfg & Asbestos Co 29 Lewis Wharf Boston 10 Mass
Ehret Magnesia Mfg Co Inc Valley Forge Pa
Johns-Manville Corp Box 290 22 E 40th N Y 16 N Y
Keasbey & Mattison Co Ambler Pa
Protective Papers Inc Union Ill
Ruberoid Co 500 Fifth Av New York 18 N Y
Union Rubber & Asbestos Co Trenton 6 N J

PAPER—building, roofing & sheathing

Angier Corp Framingham Mass
Asbestos Asphalt Insulation Inc 2100 Fullerton Av Chicago 47 Ill
Barrett Div Allied Chemical & Dye Corp 40 Rector N Y 6 N Y
Bird & Son Inc Dept AL-4 East Walpole Mass
Philip Carey Mfg Co Dept AL-4 Lockland Cincinnati 15 O
Certain-teed Products Corp 120 E Lancaster Ardmore Pa
The Flintkote Co 30 Rockefeller Plaza NY 20 NY
Hosking Paper & Supply Wilmette Ill
Johns-Manville Corp Box 290 22 E 40th N Y 16 N Y
Presstite Engineering Co 3900 Chouteau Av St Louis 10 Mo
Protective Papers Inc McHenry County Union Ill
Richkraft Co 228 N La Salle Chicago 1 Ill
Ruberoid Co 500 Fifth Av New York 18 N Y
The Sisalkraft Co Dept AL-4 205 W Wacker Dr Chgo 6 Ill
Thilmany Pulp & Paper Co Kaukauna Wis
Welt & Sons Paper Co 426 W Larned St Detroit 25 Mich

PAPER—concrete curing

Angier Corp Framingham Mass
Hosking Paper & Supply P O Drawer 43 Wilmette Ill

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Keystone Asphalt Products Co 43 E Ohio St Chicago 11 Ill
Protective Papers Inc Union Ill
Richkraft Co 228 N LaSalle St Chicago 1 Ill
Thilmany Pulp & Paper Co Kaukauna Wis
Welt & Sons Paper Co 426 W Larned St Detroit 26 Mich

PASTE—wallpaper

Cleveland Cleaner & Paste Co 7275 Neville Av S W Cleveland 2 Ohio
The Commercial Paste Co Buttles at Michigan Columbus 8 Ohio
Devoe & Raynolds Co Inc 787 1st Av New York 17 N Y
Le Page's Inc Gloucester Mass
Paisley Products Inc 1770 Canalport Av Chicago 16 Ill
Patent Cereals Co Geneva N Y
Tamms Industries Inc 228 N LaSalle Chgo 1 Ill

PATCHER—concrete

Curtis Mfg & Asbestos Co 29 Lewis Wharf Boston 10 Mass
Evercrete Corp 424 W 42nd NY NY
Rutland Fire Clay Co Rutland Vermont
Schalk Chemical Co 351 E 2nd St Los Angeles 15 Cal
Tamms Industries Inc 228 N LaSalle St Chicago 1 Ill

PENCILS—carpenters'

Blaisdell Pencil Co Philadelphia Pa
Cupples Co 401 S 7th St St Louis 2 Mo
Eugene Dietzgen Co 2425 N Sheffield Av Chicago 14 Ill
Jos Dixon Crucible Co Jersey City N J
Eagle Pencil Co 703 E 13th NY 9 NY
A W Faber-Castell Pencil Co Inc 41 Dickerson St Newark 4 N J

PENCILS—drawing

Blaisdell Pencil Co Philadelphia Pa
Cupples Co 401 S 7th St St Louis 2 Mo
Jos Dixon Crucible Co Jersey City 3 N J
Eagle Pencil Co 703 E 13th NY 9 NY
Eugene Dietzgen 2425 N Sheffield Av Chgo Ill
A W Faber-Castell Pencil Co Inc 41 Dickerson St Newark 4 N J
Keuffel & Esser Co Adams & Third Hoboken N J

PIPE—asbestos cement

Crane Co 836 S Michigan Chicago 5 Ill
Johns-Manville Corp Box 290 22 E 40th N Y 16 N Y
Keasbey & Mattison Co Ambler Pa
Universal Sewer Pipe Co 1500 Union Commerce Bldg Cleveland 14 Ohio

PIPE—clay, sewer

Bowerston Shale Co Bowerston Ohio
Cannelton Sewer Pipe Co Inc Cannelton Ind
Clay City Pipe Co Lock Drawer 272 Uhrichsville O
Columbia Pipe Co Columbia S C
Dee Clay Products Co Inc Bloomingdale Ind
Denver Sewer Pipe & Clay Co Denver Colo
W S Dickey Clay Mfg Co 922 Walnut St Kansas City 6 Mo
Evans Pipe Co Uhrichsville O
Gladding-McBean & Co San Francisco 3 Calif
Lehigh Sewer Pipe & Tile Co Ft Dodge Ia
Owensboro Sewer Pipe Co Inc Owensboro Ky
Pacific Clay Products 306 West Ave 26 Los Angeles 31 Cal
Robinson Clay Products Co Akron O
Stillwater Clay Products Co 3334 Prospect Av Cleveland 15 Ohio
Streator Drain Tile Co Streator Ill
Universal Sewer Pipe Co 1500 Union Commerce Bldg Cleveland 14 Ohio
Washington Brick & Lime Co Box 2198 Spokane 8 Wash
What Cheer Clay Prod Co What Cheer Ia

PIPE—conductor, eaves trough

Badger Corrugating Co La Crosse Wis
C G Hussey & Co 2950 Second Av Pittsburgh 19 Pa
La Crosse Steel Roofing & Corrugating Co La Crosse Wis
Lyon Conklin & Co Inc Race & McComas Sts Baltimore 3 Md
Martin Metal Mfg Co Wichita Kans
Newport Rolling Mill Co Newport Ky
Nichols Wire & Aluminum Co Davenport Ia
Mid-States Steel & Wire Co Crawfordsville Ind
Republic Steel Corp Berger Mfg Div Canton 5 Ohio
St Paul Corrugating Co St Paul 1 Minn
Tiffin Art Metal Co Tiffin 16 Ohio
Wheeling Corrugating Co Wheeling W Va
York Corrugating Co York Pa

PIPE—fibre

Brown Co Bermico Div 500 Fifth Av New York 18 N Y
Orangeburg Mfg Co 488 Madison Av New York 22 N Y

PIPE—iron culvert

Armco Steel Corp Middletown Ohio
Beall Pipe & Tank Corp Portland Ore
Newport Rolling Mill Co Newport Ky
Republic Steel Corp Republic Bldg Cleveland 1 Ohio
St Paul Corrugating Co St Paul Minn
United Steel Fabricators Inc Wooster Ohio
Wheeling Corrugating Co Wheeling W Va

PIPE—steel & wrought iron

Allegheny Ludlum Steel Corp Oliver Bldg Pittsburgh 22 Pa (stainless steel only)
Armco Drainage & Metal Products Inc Middletown Ohio
Beall Pipe & Tank Corp Portland Ore
Bethlehem Steel Co Bethlehem Pa
A M Byers Co Clark Bldg Pittsburgh 30 Pa (wrought iron only)
Columbia Steel Co Russ Bldg San Francisco 6 Cal
Crane Company 836 S Michigan Av Chgo Ill
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Jones & Laughlin Steel Corp Pittsburgh Pa
National Tube Co U S Steel Corp Sub Frick Bldg Pittsburgh 30 Pa
Republic Steel Corp Republic Bldg Cleveland 1 Ohio
Wheeling Corrugating Co Wheeling W Va
Youngstown Sheet & Tube Co Youngstown 1 Ohio

PIPE—wood

Baltimore Cooperage Tank & Tower Co Baltimore Md
W E Caldwell Co Louisville 8 Ky
Caspar Lbr Co San Francisco Calif
Johnson & Carlson 848 W Eastman St Chicago 22 Ill
M & M Wood Working Co Resnprest Div 2301 N Columbia Portland 3 Ore
Pacific Wood Tank Corp 461 Market St San Francisco 5 Calif (continuous stave)
Redwood Mfrs Co Pittsburg Calif
A Wyckoff & Son Co Elmira N Y

PIPE CLEANERS—chemical

B T Babbitt Inc 386 4th Av New York 16 N Y
Boyer Chemical Laboratory Co Inc 2232 Wabash Av Chicago 16 Ill
Oakite Products Inc 22 Thames New York 6 N Y
Pennsylvania Salt Mfg Co Philadelphia 7 Pa

PIPE COVERING—asbestos

Acme Asbestos Covering & Flooring Co 246 N Elizabeth Chgo 7 Ill
Philip Carey Mfg Co Dept AL-4 Cincinnati 15 Ohio
Curtis Mfg & Asbestos Co 29 Lewis Wharf Boston 10 Mass
Ehret Magnesia Mfg Co Inc Valley Forge Pa
Johns-Manville Corp Box 290 22 E 40th N Y 16 N Y
Keasbey & Mattison Co Ambler Pa
Ruberoid Co 500 Fifth Av New York 18 N Y
Standard Asbestos Mfg Co 860 Evergreen Av Chgo 22 Ill

PIPE JOINT COMPOUNDS

Calbar Paint & Varnish Co 2612-26 N Martha St Philadelphia 25 Pa
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Koppers Co Inc Tar Products Div Pittsburgh 19 Pa
Lake Chemical Co 162-P N Clinton Chicago 6 Ill
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Presstite Engineering Co 3900 Chouteau Av St Louis 10 Mo
Sauereisen Cements Co 2218 Sharpsburg St Pittsburgh 15 Pa
Smooth-On Mfg Co 572 Communipaw Av Jersey City 4 N J
X-Pando Corp 43-15 36th Long Island City 1 N Y

PIPE & TUBING—plastic

Commonwealth Plastics Inc Superior Plastics Div 426 N Oakley Blvd Chgo 12 Ill
Extruded Plastics Inc Norwalk Conn
The B F Goodrich Co Akron Ohio
Raybestos-Manhattan Inc Passaic N J
U S Rubber Co 1230 Avenue of the Americas New York 20 N Y

PLAN SERVICES—house, farm

American Plan Service 2701 Biscayne Blvd Miami 37 Fla
Architectural Plan Service Inc 89-51 164th St Jamaica 3 N Y
Brown-Blodgett Co St Paul Minn
Building Products Merchandising Service 1413 Allison St N W Washington 11 D C
Continental Steel Corp Kokomo Ind
L F Garlinghouse Co Topeka Kan
Home Plan Book Co 1596 Selby Av St Paul 4 Minn
Home Planners Inc 11711 E 8 Mi Rd East Detroit Mich
National Plan Service Inc 1315 W Congress Chgo 7 Ill
U-Build Enterprises Van Nuys Calif

PLANK—extension

Breyer Bros Whiting & Co Waupun Wis
Goshen Mfg Co 10th & Reynolds Sts Goshen Ind
Howard Mfg Co Kent Wash & 2428 E 56th St Los Angeles 58 Calif
Newark Ladder & Bracket Co Inc Clark (Rahway) N J
Woodenware Products Corp 122 N 7th St St Louis 1 Mo

PLANK—fiber, insulating

Celotex Corp 120 S LaSalle Chicago 3 Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Fir-tex Porter Bldg Portland 4 Ore
The Flintkote Co 30 Rockyelle Plaza N Y 20 N Y
Insulite Div Minnesota & Ontario Paper Co 500 Baker Arcade Bldg Minneapolis 2 Minn
Johns-Manville Corp Box 290 22 E 40th New York 16 N Y
U S Gypsum Co 300 W Adams Chgo 6 Ill

PLASTER—acoustical

Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Kelley Island Lime & Transport Co 1122 Leader Bldg Cleveland 14 Ohio
Mission Lime Products Corp 841 Ducommun St Los Angeles 12 Cal
National Gypsum Co Buffalo 2 N Y
B F Nelson Mfg Co Minneapolis 13 Minn
F E Schundler & Co Inc 504 Railroad St Joliet Ill
Sealcon Products Inc 927 Second Av S Minneapolis 2 Minn
U S Gypsum Co 300 W Adams Chgo 6 Ill
Western Mineral Products Co Milwaukee 4 Wis
Zonolite Co 135 S LaSalle Dept AL-42 Chicago 3 Ill

PLASTER—colored finishing

Beautex Plaster Mfg Co Lebanon Pa
E D Coddington Mfg Co 5024 N 37th St Milwaukee 9 Wis
Grand Rapids Plaster Co Grand Rapids 3 Mich
National Gypsum Co 325 Delaware Av Buffalo 2 N Y
Ohio Hydrate & Supply Co Woodville O
Penn Crete Products Co 20th & Lippincott Sts Philadelphia 32 Pa
Sealcon Products Inc 927 Second Av S Minneapolis 2 Minn
Tamms Industries Inc 228 N LaSalle Chgo 1 Ill
U S Gypsum Co 300 W Adams Chgo 6

PLASTER—fibered

Celotex Corp 120 S LaSalle St Chgo 3 Ill
E D Coddington Mfg Co 5024 N 37th St Milwaukee 9 Wis
Fairmont Wall Plaster Co Fairmont W Va
Ideal Cement Co Colorado Portland Div 821 17th St Denver 2 Colo
National Gypsum Co Buffalo 2 N Y
Ohio Hydrate & Supply Co Woodville O
Sealcon Products Inc 927 Second Av S Minneapolis 2 Minn
U S Gypsum Co 300 W Adams Chgo 6
Woodville Lime Prods Co Toledo O

PLASTER—gypsum

Alabastine Paint Products Div of Chicago Bronze & Color Wks 2672 W Grand Av Chgo 12 Ill

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Celotex Corp 120 S LaSalle Chgo 3 Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Grand Rapids Plaster Co Grand Rapids 2 Mich
National Gypsum Co Buffalo 2 N Y
Sealcon Products Inc 927 Second Av S Minneapolis 2 Minn
Tamms Industries Inc 228 N LaSalle Chicago 1
U S Gypsum Co 300 W Adams Chgo 6

PLASTER—insulating

Celotex Corp 120 S LaSalle St Chicago 3 Ill
National Gypsum Co Buffalo 2 N Y
F E Schundler & Co Inc 504 Railroad St Joliet Ill
Sealcon Products Inc 927 Second Av S Minneapolis 2 Minn
Sno-Lite Products Co 232 W First St Reno Nevada
Zonolite Co 135 S LaSalle St Dept AL-42 Chicago 3 Ill

PLASTER—lime

Celotex Corp 120 S LaSalle St Chgo 3 Ill
Grand Rapids Plaster Co Grand Rapids 2 Mich
Kelley Island Lime & Transport Co 1132 Leader Building Cleveland 14 Ohio
National Gypsum Co Buffalo 2 N Y
Ohio Hydrate & Supply Co Woodville O
United States Gypsum Co 300 W Adams St Chgo 6 Ill
Woodville Lime Prods Toledo O

PLASTER—patching

Celotex Corp 120 S LaSalle St Chicago 3 Ill
Certain-teed Prods Corp 120 E Lancaster Av Ardmore Pa
E D Coddington Mfg Co 5024 N 37th St Milwaukee 9 Wis
Donald Durham Co P O Box 804 Des Moines 4 Iowa
Ideal Cement Co Colorado Portland Div 821 17th St Denver 2 Colo
Muralo Co Inc 566 Richmond Terrace Staten Island N Y
National Gypsum Co Buffalo 2 N Y
Reardon Co St Louis Mo
Rutland Fire Clay Co Rutland Vt
Savogran Co 25 Huntington Av Boston 16 Mass
Schalk Chemical Co 351 E 2nd St Los Angeles 12 Calif
Tamms Industries Inc 228 N LaSalle Chgo 1 Ill
U S Gypsum Co 300 W Adams Chgo 6
United Gilsonite Laboratories Scranton Pa
X-Pando Corp 43-15 36th St Long Island City 1 N Y

PLASTERBOARD

Celotex Corp 120 S LaSalle Chgo 3 Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Grand Rapids Plaster Co Grand Rapids 2 Mich
National Gypsum Co Buffalo 2 N Y
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
Tamms Industries Inc 228 N LaSalle Chicago Ill
U S Gypsum Co 300 W Adams Chgo 6

PLASTER OF PARIS

Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Fairmont Wall Plaster Co Fairmont W Va
Grand Rapids Plaster Co Grand Rapids 2 Mich
National Gypsum Co Buffalo 2 N Y
Tamms Industries Inc 228 N LaSalle Chgo 1 Ill
U S Gypsum Co 300 W Adams Chgo 6 Ill

PLASTIC—waterproof

Abesto Mfg Co Michigan City Ind
American Fluresit Co Inc 4011 Red Bank Rd Cincinnati 27 Ohio
Bird & Son Inc Dept AL-4 East Walpole Mass
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
E I du Pont de Nemours & Co Inc Wilmington 98 Del
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Technical Supply Co 1911 University Av Palo Alto Calif
X-Pando Corp 43-15 36th St Long Island City 1 N Y

PLASTIC GLAZING—transparent

Arvey Corp 3462 N Kimball Chicago 18 Ill
The Dobeckmun Co Cleveland 1 Ohio
Sol-O-Lite Mfg Co 4301 West North Av Chgo Ill
Warp Brothers 1100 N Cicero Av Chgo 51 Ill

PLASTIC LAMINATES

Aetna Plywood & Veneer Co 1732 Elston Av Chgo 22 Ill
Arborite Co Ltd c/o J A Davies & Co 314 Straight Av S E Grand Rapids Mich
Consolidated Water Power & Paper Plastics Div Wisconsin Rapids Wis
Farley & Loetscher Mfg Co Dubuque Ia
Fiddes-Moore & Co 4950 State Line Av Hammond Ind
Formica Insulation Co 4501 Spring Grove Av Cincinnati 32 Ohio
General Electric Co Chemical Dept 1 Plastics Av Pittsfield Mass
Haskelite Mfg Co 701 Ann N W Grand Rapids Mich
Milwaukee Plywood Co 1227 W Bruce St Milwaukee 4 Wis
Ohio Rubber Co Versibond Div Willoughby Ohio
Panelyte Div St Regis Sales Corp 230 Park Ave New York 17 N Y
Parkwood Corp 24 Water St Wakefield Mass
Roddis Plywood Corp Marshfield Wis
U S Plywood Corp Micarta Div 55 W 44th St New York 18 N Y
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
Westinghouse Elec Corp Micarta Div First National Bldg Pittsburgh 30 Pa
Woodall Industries Inc Skokie Ill

PLASTICIZED WOOD PUTTY

Boyle-Midway Inc 22 E 40th St New York 16 N Y
Breinig Bros Inc Hoboken N J
Calbar Paint & Varnish Co 2612 N Martha St Philadelphia 25 Pa
National Casein Sales 601 W 80th St Chicago 20 Ill
Schalk Chemical Co 351 E 2nd St Los Angeles 12 Calif
Sewall Paint & Varnish Co 1306 River St Dallas 2 Tex
Wellman Products Co 1444 E 49th St Cleveland 3 Ohio

PLATES—mail box

Ajax Hardware Mfg Co 4851 Valley Blvd Dept 2A Los Angeles 32 Calif
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Donley Bros 13928 Miles Av Cleveland 5 Ohio
P & F Corbin Div American Hdwe Corp New Britain Conn
H B Ives Co New Haven 8 Conn
Natl Brass Co Grand Rapids Mich
S Parker Hdwe Mfg Corp 27 Ludlow New York 2 N Y
Peabody Co Inc 5816 Hooper Av Los Angeles Calif
Reflecto Letters Inc 411 E 101st St New York 29 N Y
Standard Bronze Co Bayonne 8 N J

PLATES—push & kick

Allmetal Weatherstrip Co 229 W Ohio Chgo Ill
Ames Metal Moulding Co Inc 225 E 144th St New York 51 N Y
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Columbus Brass Mfg Co 620 Dublin Av Columbus 16 Ohio
Detroit Hdwe Mfg Corp 1320 Mt Elliott Av Detroit 7 Mich
P & F Corbin Div American Hdwe Corp New Britain Conn
Frantz Mfg Co Sterling Ill
Macklanburg - Duncan Co Oklahoma City Okla
Ingram-Richardson Mfg Co Beaver Falls Pa
Natl Brass Co Grand Rapids Mich
Newman Bros Inc Dept A-L 660 W 4th St Cincinnati 3 Ohio
S Parker Hdwe Mfg Corp 27 Ludlow New York 2 N Y
Pittsburgh Plate Glass Co 2126 Grant Bldg Pittsburgh 19 Pa
Russell & Erwin Div The American Hardware Corp New Britain Conn
Technical Glass Co Inc 2050 E 48th St Los Angeles 58 Calif

PLUMBING FIXTURES

American Radiator & Standard Sanitary Corp Pittsburgh 22 Pa
Briggs Mfg Co Detroit Mich
W A Case & Son Mfg Buffalo N Y
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Crane Company 836 S Michigan Av Chgo Ill
Eljer Co Ford City Pa
General Ceramics Co Sanitary Ware Div Metuchen N J
Kohler Co Kohler Wis
Mullins Mfg Co Warren O
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Universal-Rundle Corp New Castle Pa

PLYWOOD—douglas fir

Aberdeen Plywood Corp Aberdeen Wash
Aetna Plywood & Veneer Co 1732 Elston Chicago 22 Ill
Am-Mex Sales Co Inc 28 Church Buffalo 2 N Y
Anacortes Veneer Inc Anacortes Wash
Associated Plywood Mills Inc Eugene Oregon
Bellingham Plywood Corp Bellingham Wash
Braund-Harmon Co 214 Webeek Bldg Birmingham Mich
Buffelen Lbr & Mfg Co Tacoma Wash
Davis Plywood Corp 12555 Berea Rd Cleveland 11 Ohio
Douglas Fir Plywood Assn Tacoma 2 Wash
Dyke Associates Inc Little Rock Ark
Elliott Bay Mill Co Seattle Wash
Engineered Plywood Products Co P O Box 1326 Tacoma Wash
Evans Products Co Dept S-14 Plymouth Mich
Fiddes-Moore & Co 4950 State Line Av Hammond Ind
Georgia-Pacific Plywood Co Southern Finance Bldg Augusta Ga
Harbor Plywood Corp P O Box 300 Hoquiam Wash
Heidner & Co Tacoma 1 Wash
Keller Prods Inc Manchester N H
Kochton Plywood & Veneer 509 W Roosevelt Rd Chicago 7 Ill
Long-Bell Lbr Co PO Box 1079 Longview Wash & R A Long Bldg Kansas City Mo
M & M Wood Working Co Resnpreat Div 2301 N Columbia Portland 3 Ore
Mauk Seattle Lbr Co Skinner Bldg Seattle 1 Wash
Milwaukee Plywood Co 1227 W Bruce St Milwaukee 4 Wis
National Plywoods Inc 2710 Throop Chgo Ill
North-Robbins Plywood Inc 410 Terry Av North Seattle 9 Wash
Northwest Door & Plywood Sales Inc Tacoma 1 Wash
Pacific Mutual Door Co Plywood Division Tacoma Wash
Pacific Plywood Corp Willamina Ore
Frank Paxton Lbr Co Kansas City Kansas
Oregon Plywood Sales Corp 1234 Broadway Buffalo N Y
Peninsula Plywood Corp Port Angeles Wash
Plywood Inc 4445 Bellevue Av Detroit 7 Mich
Puget Sound Plywood Inc Tacoma Wash
Raleigh Chinn Co Henry Bldg Seattle 1 Wash
Robinson Mfg Co Everett Wash
Roddis Plywood Corp Marshfield Wis
Geo J Silbernagel 8 S Michigan Av Chicago Ill
Simpson Logging Co 1065 Stuart Bldg Seattle 1 Wash
Springfield Plywood Co Springfield Ore
United States Plywood Corp Dept 615 55 W 44th New York 18 N Y
Vancouver Plywood & Veneer Co Vancouver Wash
Walton Plywood Co Everett Wash
Washington Veneer Co Olympia Wash
West Coast Plywood Co Aberdeen Wash
Western Door & Plywood Corp Portland Ore
Weyerhaeuser Sales Co St Paul 1 Minn
The Wheeler Osgood Co 1216 St Paul Av Tacoma 1 Wash
Wilamette Valley Lbr Co Dallas Ore
Zeesman Plywood Corp 2316 S Santa Fe Av Los Angeles 11 Calif

PLYWOOD—douglas fir exterior

Aberdeen Plywood Corp Aberdeen Wash
Aetna Plywood & Veneer Co 1732 Elston Av Chgo 22 Ill
Associated Plywood Mills Inc Eugene Ore
Bellingham Plywood Corp Bellingham Wash
Buffelen Lbr & Mfg Co Tacoma Wash
Braund-Harmon Co 214 Wabeek Bldg Birmingham Mich
Davis Plywood Corp 12555 Berea Rd Cleveland 11 Ohio
Douglas Fir Plywood Association Tacoma 2 Wash
Engineers Plywood Products Co P O Box 1326 Tacoma Wash

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

UNIVERSITY OF MICHIGAN LIBRARIES

Evans Products Co Dept S-14 Plymouth Mich
Fiddes-Moore & Co 4950 State Line Av Hammond Ind
Georgia-Pacific Plywood Co Southern Finance Bldg Augusta Ga
Harbor Plywood Corp P O Box 300 Hoquiam Wash
Heidner & Co Tacoma 1 Wash
Kochton Plywood & Veneer 509 W Roosevelt Rd Chicago 7 Ill
Long-Bell Lbr Co PO Box 1079 Longview Wash & R A Long Bldg Kansas City Mo
M & M Wood Working Co Resnprest Div 2301 N Columbia Portland 3 Ore
Mauk Seattle Lbr Co Skinner Bldg Seattle 1 Wash
The Mengel Co Inc Louisville 1 Ky
Milwaukee Plywood Co 1227 W Bruce St Milwaukee 4 Wis
National Plywoods Inc 2710 S Throop Chgo Ill
North-Robbins Plywood Inc 410 Terry Av North Seattle 9 Wash
Northwest Door & Plywood Sales Tacoma 1 Wash
Oregon Plywood Sales Corp 1234 Broadway Buffalo N Y
Pacific Mutual Door Co Plywood Div Tacoma 2 Wash
Peninsula Plywood Corp Port Angeles Wash
Plywood Inc 4445 Bellevue Av Detroit 7 Mich
Puget Sound Plywood Inc Tacoma Wash
Raleigh Chinn Co Henry Bldg Seattle 1 Wash
Robinson Mfg Co Everett Wash
Roddis Plywood Corp Marshfield Wis
Geo J Silbernagel 8 S Michigan Av Chicago 3 Ill
Simpson Logging Co 1065 Stuart Bldg Seattle 1 Wash
U S Mengel Plywoods Inc Box 1612 Louisville 1 Ky
United States Plywood Corp Dept 615 W 44th New York 18 N Y
West Coast Plywood Co Box 1180 Aberdeen Wash (also interior)
Weyerhaeuser Sales Co St Paul 1 Minn
The Wheeler Osgood Co 1216 St Paul Av Tacoma 1 Wash

PLYWOOD—hardwood

Aetna Plywood & Veneer Co 1732 Elston Av Chicago 22 Ill
Albany Plywood Co Inc 290 S Pearl St Albany N Y
American Plywood Corp Div of Curtis Cos New London Wis & Clinton Ia
Anderson-Tully Co Memphis Tenn
Atlas Plywood Corp Statler Bldg Boston 16 Mass
T C Blick Plywood Co Inc 363 Park Av East Hartford Conn
W R Braund Co Suite 214 Wabeek Bldg Birmingham Mich
Darlington Veneer Co Inc Darlington S C
Davis Plywood Corp Cleveland 11 Ohio
Daystrom Laminates Inc Daystrom N C
Dixie Lbr Co Inc 8201 Fig St New Orleans La
Fiddes-Moore & Co 4950 State Line Av Hammond Ind
Georgia-Pacific Plywood Co Southern Finance Bldg Augusta Ga
Haskelite Mfg Co Grand Rapids Mich
Higgins Inc New Orleans La
Hoosier Panel Co New Albany Ind
Indiana Veneer & Panel Co New Albany Ind
Ipik Plywood Co Kenner La
International Fibre Board & Plywood Sales Ltd Gatineau Quebec Canada (Birch)
Jamestown Veneer & Plywood Corp Jamestown N Y
Keller Products Inc Manchester N H
J G Kennedy Lbr Co 4416 White Henry Stuart Bldg Seattle 1 Wash
Kochton Plywood & Veneer 509 W Roosevelt Rd Chicago 7 Ill
M & M Wood Working Co Resnprest Div 2301 N Columbia Portland 3 Ore
The Mengel Co Inc 2302 S 4th Louisville 1 Ky
Milwaukee Plywood Co 1227 W Bruce St Milwaukee 4 Wis
National Plywoods Inc 2710 S Throop Chgo Ill
Niagara Plywood Co Inc 1234 Broadway Buffalo N Y
Nickey Bros Co Memphis 12 Tenn
Northern Hdw Veneers Inc Butternut Wis
Frank Paxton Lbr Co Kansas City Kansas
Pearl City Plywood Co Inc Jamestown NY
Plywood Inc 4445 Bellevue Av Detroit 7 Mich
Plywood & Door Mfg Corp 11 W 42nd St New York 13 N Y
Raleigh Chinn Co Henry Bldg Seattle 1 Wash
Roddis Plywood Corp Marshfield Wis
Scranton Plywood Co 45 Elizabeth St Forty Fort Pa
Thomason Plywood Corp Fayetteville N C
U S Mengel Plywoods Inc Box 1612 Louisville 1 Ky
United States Plywood Corp Dept 615 55 W 44th New York 18 N Y
Weber Veneer & Plywood Co Shawano Wis

PLYWOOD—pine

Aetna Plywood & Veneer Co 1732 Elston Av Chgo 22 Ill
W R Braund Co 214 Wabeek Bldg Birmingham Mich
Davis Plywood Corp 12555 Berea Rd Cleveland 11 Ohio
Fiddes-Moore & Co 4950 State Line Av Hammond Ind
Georgia-Pacific Plywood Co Southern Finance Bldg Augusta Ga
Keller Products Inc Manchester N H
J G Kennedy Lbr Co 4416 White-Henry Stuart Bldg Seattle 1 Wash
Kochton Plywood & Veneer 509 W Roosevelt Rd Chicago 7 Ill
Long-Bell Lumber Co R A Long Bldg Kansas City 6 Mo & Longview Wash
The Mengel Co Inc Louisville 1 Ky
Milwaukee Plywood Co 1227 W Bruce St Milwaukee 4 Wis
Oregon Plywood Sales Corp 1234 Broadway Buffalo N Y
Pacific Mutual Door Co Plywood Division Tacoma 2 Wash
Plywood & Door Mfg Corp 11 W 42nd St New York 13 N Y
Plywood Inc 4445 Bellevue Av Detroit Mich
Raleigh Chinn Co Henry Bldg Seattle 1 Wash
Roddis Plywood Corp Marshfield Wis
Geo J Silbernagel 8 S Michigan Av Chicago 3 Ill
Tarter Webster & Johnson Inc P O Box 1731 Stockton Calif
U S Mengel Plywoods Inc Box 1612 Louisville 1 Ky
United States Plywood Corp Dept 615 55 W 44th New York 18 N Y

PLYWOOD—plastic faced

Aetna Plywood & Veneer Co 1732 Elston Av Chicago 22 Ill
Buffelen Lbr & Mfg Co Tacoma Wash
Davis Plywood Corp 12555 Berea Rd Cleveland 11 Ohio
Douglas Fir Plywood Association Tacoma 2 Wash
Fiddes-Moore & Co 4950 State Line Av Hammond Ind
Georgia-Pacific Plywood Co Southern Finance Bldg Augusta Ga
Harbor Plywood Corp P O Box 300 Hoquiam Wash
Kochton Plywood & Veneer Co Inc 509 W Roosevelt Rd Chgo 7 Ill
M & M Wood Working Co Resnprest Div 2301 N Columbia Portland 3 Ore
The Mengel Co Inc 2302 S 4th Louisville Ky
Milwaukee Plywood Co 1227 W Bruce St Milwaukee 4 Wis
National Plywoods Inc 2710 S Throop Chicago Ill
North-Robbins Plywood Inc 410 Terry Av No Seattle 9 Wash
Pearl City Plywood Co Inc Jamestown NY
Simpson Logging Co Seattle Wash
U S Mengel Plywoods Inc Box 1612 Louisville 1 Ky
United States Plywood Corp Dept 615 55 W 44th New York 18 N Y
West Coast Plywood Co Box 1180 Aberdeen Wash
The Wheeler Osgood Co 1216 St Paul Av Tacoma 1 Wash

PLYWOOD SEALER

Aetna Plywood & Veneer Co 1732 Elston Av Chicago 22 Ill
Breinig Bros Inc Hoboken N J
Chi-namel Paine & Varnish Co Minneapolis Minn
Davis Plywood Corp 12555 Berea Rd Cleveland 15 Ohio
Fiddes-Moore & Co 4950 State Line Av Hammond Ind
The Mengel Co Inc Louisville 1 Ky
Milwaukee Plywood Co 1227 W Bruce St Milwaukee 4 Wis
Minnesota Paints Inc Minneapolis Minn
Monsanto Chemical Co Western Div 911 Western Av Seattle 4 Wash
Oregon Plywood Sales Corp 1234 Broadway Buffalo N Y
U S Mengel Plywoods Inc Box 1612 Louisville 1 Ky
United States Plywood Corp Dept 615 55 W 44th St New York 18 N Y

POINTS—glazier

Black Panther Tool Co 401 N Broad St Philadelphia 8 Pa
Fletcher Terry Co 592 South St Forestville Conn
Glaziers' Tool Mfg Co 611 W Adams Chicago 6 Ill
W H Maze Co Peru Ill
Red Devil Tools Irvington 11 N J
Royal Glass Works Corp 50-20 25th St Long Island City N Y

POLISH—floor

Boyle-Midway Inc 22 E 40th St New York 16 N Y
E L Bruce Co Box 397 Memphis Tenn
Chemical Supply Co 225 Plymouth Bldg Cleveland 15 Ohio
Clarke Sanding Machine Co 464 Clay St Muskegon Mich
Crescent Products Co 315 N 14th St Terre Haute Ind
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Ensign Products Co Cleveland 5 Ohio
Minnesota Platon Corp Pipestone Minn
O-Cedar Corp 2246 W 49 Chgo Ill
Pabco Products Inc 475 Brannan St San Francisco Cal
Sherwin-Williams Co Cleveland O
Simoniz Company 2100 S Indiana Av Chgo Ill
Socony-Vacuum Oil Co 26 Broadway NYC NY
Standard Oil Co of Indiana 910 S Michigan Av Chgo Ill

POLISH—furniture

American Varnish Co 1138 N North Branch Chgo 22 Ill
Boston Varnish Co Boston Mass
Boyle-Midway Inc 22 E 40th St New York 16 N Y
Crescent Products Co Terre Haute Ind
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Franklin Research Co 5134 Lancaster Av Philadelphia 31 Pa
Gold Seal Co Bismarck N D
O-Cedar Corp 2246 W 49th Chgo Ill
Puritan Chemical Co Atlanta 3 Ga
Rubon Woodfinishing & Products Co 500 W 7th St Kansas City 6 Mo
Simoniz Company 2100 S Indiana Av Chgo Ill
Socony-Vacuum Oil Co Inc 26 Broadway NY NY

POST HOLE DIGGERS

American Fork & Hoe Co Cleveland 15 Ohio
Ames Baldwin Wyoming Co Parkersburg W Va
Buda Co Harvey Ill
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Franklin Equipment Co Monticello Iowa
Mall Tool Co 7733 S Chicago Av Chicago 19 Ill
Woodings-Verona Tool Works Verona Pa

POSTS—adjustable floor leveling & supporting

Akron Products Co Seville Ohio
Brainard Steel Co Dept F-4 Bldg Products Div 3411 Griswold St St Warren 3 Ohio
Holm's Mfg Co of Ohio 103 N Main Akron 8 Ohio
Perma-Jack Corp Cleveland 11 Ohio
Sawhill Mfg Co Sharon Pa
N B Spurgeon Co 20 N Wacker Dr Chicago 6
United Metal Products Inc Akron 11 Ohio
Wolfe Products Inc 765 Miami St Akron 11 Ohio

POSTS—steel fence, farm

American Steel & Wire Co Rockefeller Bldg 614 Superior Av N W Cleveland 13 Ohio
Bethlehem Steel Co Bethlehem Pa
Calumet Steel Co 310 S Michigan Av Chicago Ill
Columbia Steel Co Russ Bldg San Francisco 6 Cal
Continental Steel Corp Kokomo Ind
Dare Products Inc Dept AL 66 E Jackson St Battle Creek Mich (Elec fence posts)
Keystone Steel & Wire Co Peoria 1 Ill
Mid-States Steel & Wire Co Crawfordsville Ind

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Northwestern Steel & Wire Co Sterling Ill
Republic Steel Corp Republic Bldg Cleveland 1 Ohio
Tennessee Coal Iron & RR Co U S Steel Corp Sub Birmingham 2 Ala
Wickwire Spencer Steel Div of the Colorado Fuel & Iron Corp 500 Fifth Av NY 18 NY

POSTS—wood

Crossett Lbr Co Crossett Ark
Frost Lumber Industries Inc Shreveport La
Long-Bell Lbr Co RA Long Bldg Kansas City Mo and Longview Wash
L D MacFarland Co Ltd Sandpoint Idaho
MacGillis & Gibbs Co 324 E Wisconsin Av Milwaukee 2 Wis
T R Miller Mill Co Brewton Ala
National Pole & Treating Div Minnesota & Ontario Paper Co 500 Arcade Bldg Minneapolis 2 Minn
Nebr Bridge Sup & Lbr Co Omaha Nebr
Republic Creosoting Co Merchants Bank Bldg Indianapolis 4 Ind
Southwestern Cresoting Co Muskogee Okla
Weyerhaeuser Sales Co St Paul 1 Minn
Wood Products Co 421 Phillips Av Toledo 12 Ohio

POULTRY EQUIPMENT

Aeroil Burner Co Inc Park Av & 57th West New York N J
Brower Mfg Co Quincy Ill
Clay Equip Corp Cedar Falls Ia
James Mfg Co Fort Atkinson Wis
Silent Sioux Oil Burner Corp Orange City Ia

POULTRY HOUSES

GBH-Way Homes Inc Walnut Ill
Super-Structures Inc Albert Lea Minn

POWER UNITS

The Filer & Stowell Co 147 E Becher St Milwaukee 7 Wis
International Harvester Co 180 N Michigan Av Chgo 1 Ill
Leitelt Iron Works Grand Rapids 2 Mich
Sterling Foundry Co Inc Sterling Ill
Waukesha Motor Co Waukesha Wis

PREFABRICATED CHIMNEYS

Chimney Sales Co National Bank Bldg Fredericksburg Va
Condensation Engineering Corp 2511 W Potomac Av Chicago 51 Ill
Majestic Co 303-C Erie St Huntington Ind
Van Packer Corp Dept 1304 134 S Clark Chgo Ill

PREFABRICATED FARM BUILDINGS

Butler Mfg Co 13th & Eastern Av Kansas City 3 Mo
Clayton & Lambert Mfg Co 1701 Dixie Highway Louisville 10 Ky (steel)
Crawford Corp Baton Rouge 1 La
Factory Built Homes Inc McDonough N Y
GBH-Way Homes Inc Dept AD Walnut Ill (brooder & laying houses, hog houses)
Green Lumber Co Laurel Miss
Houston Ready-Cut House Co Houston 1 Tex
James Mfg Co Ft Atkinson Wis
Johnson Co 235 S Dock St Sharon Pa
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Precision-Built Homes Corp Trenton N J
Starline Inc Harvard Ill
Super-Structures Inc Albert Lea Minn
The Strathmoor Co 14000 Grand River Av Detroit 27 Mich
Timber Structures Inc Portland 8 Ore
Truscon Steel Co Youngstown 1 Ohio

PREFABRICATED GARAGES

Adirondack Log Cabin Co Inc 222 E 46th St New York 17 N Y
Crawford Corp Baton Rouge 1 La
Factory Built Homes Inc McDonough N Y
GBH-Way Homes Inc Walnut Ill
The Green Lumber Co Laurel Miss
Johnson Co 235 S Dock St Sharon Pa
Pre-Fab Industries 1601 Main St South Bend 23 Ind
Richmond Builders Inc 425 N W "K" St Richmond Ind
Sno-Lite Products Co Inc Reno Nev
Southern Mill & Mfg Co P O Box 1037 Tulsa 1 Okla
The Strathmoor Co 14000 Grand River Av Detroit 27 Mich
Super-Structures Inc Albert Lea Minn
U S-Challenge Co 33 S Dearborn Chgo 3 Ill

PREFABRICATED HOUSES

Adirondack Log Cabin Co 222 E 46th St New York 17 N Y
Allied Housing Associates Inc Langhorne Pa
American Houses Inc 165 W 46th St New York 19 N Y
Crawford Corp Baton Rouge 1 La
Ess-Wood Corp 424 Madison Ave New York 17 N Y
Factory Built Homes Inc McDonough N Y
GBH-Way Homes Inc Walnut Ill
General Houses Inc 400 W Madison Chgo Ill
Green Lumber Co Laurel Miss
Gunnison Homes Inc New Albany Ind
Harnischefeger Corp Houses Div Port Washington Wis
Hoosier Homes Inc 709 E 38th St Indianapolis Ind
Houston Ready-Cut House Co Houston 1 Tex
Johnson Co 235 S Dock St Sharon Pa
Knox Corp Thomson Ga
National Homes Corp of Indiana 52 By Pass Lafayette Ind
Plywood Structures Inc Los Angeles Cal
Precision-Built Homes Corp Trenton N J
Pre-Fab Industries 1601 Main St South Bend 23 Ind
Reynolds Metals Co Bldg Products Div 2002 S 9th St Louisville 1 Ky
Richmond Builders Inc 425 N W "K" St Richmond Ind
Shelter Industries Inc 630 Fifth Av New York 20 N Y
Soule Steel Co 1750 Army St San Francisco 24 Cal
Southern Mill & Mfg Co Tulsa Okla
The Strathmoor Co 14000 Grand River Av Detroit 27 Mich
Super-Structures Inc Albert Lea Minn
Texas Housing Co Inc 9003 Denton Dr Dallas 9 Texas
Unit Structures Inc Peshtigo Wis
Weyerhaeuser Sales Co St Paul 1 Minn

PRESERVATIVE—awning, tarpaulin, rope

Ceraseal Chemical Corp 2216 South St Lafayette Ind
Cuprinol Div Darworth Inc 53 Maple St Simsbury Conn
The Dow Chemical Co Midland Mich
Ensign Products Co Cleveland 5 Ohio
Etling Window Dept AL Barberton O
Glidden Co Cleveland 2 Ohio
Grasselli Chemical Dept E I du Pont de Nemours & Co Inc Wilmington 98 Del
Haynes Products Co 4007 Farnum St Omaha 3 Neb
H B Fred Kuhls 6413 Third Av Brooklyn N Y
Materials & Treatment Co Inc 2326 N 3rd St Milwaukee 12 Wis
Nelsonite Chemical Products Inc 226 Scribner Ave N W Grand Rapids 2 Mich
Monsanto Chemical Co 1700 S Second St Louis 4 Mo
Protection Products Mfg Co Kalamazoo 99 Mich
Standard Industrial Products Inc Box 325 Evansville 4 Ind
Vita-Var Corp 46 Albert St Newark 2 N J
Wood Treating Chemicals Co 5137 Southwest Av Dept AL St Louis 10 Mo

PRESERVATIVE—wood

Abesto Mfg Corp Dept D3 Michigan City Ind
American Lumber & Treating Co 1671 McCormick Bldg Chicago 4 Ill.
Barrett Div Allied Chemical & Dye Corp 40 Rector St New York 6 N Y
Breinig Bros Inc Hoboken N J
E L Bruce Co Box 397 Memphis 1 Tenn
Samuel Cabot Inc 420 Oliver Bldg Boston 9 Mass
Carbolineum Wood Preserving Co Dept 12 528 W Highland Ave Milwaukee 3 Wis
Ceraseal Chemical Corp 2216 South St Lafayette Ind
Chapman Chemical Co 707 Dermon Bldg Memphis 3 Tenn
Chemical Research Products Co Inc 235 W Olney Rd Norfolk Va
Coopers Creek Chemical Corp West Conshohocken Pa
Cre-O-Tox Chem Co Memphis Tenn
Cuprinol Div Darworth Inc 53 Maple St Simsbury Conn
Devoe & Raynolds Co Inc Dept A-5 787 First Av N Y 17 N Y
The Dow Chemical Co Midland Mich
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Glidden Co Cleveland 2 Ohio
Gordon Chemical Co Inc 1700 Hickory St Kansas City 7 Mo
Koppers Co Inc Tar Products Div Pittsburgh 19 Pa
Nelsonite Chemical Products Inc 900 Monroe Av N W Grand Rapids 2 Mich
Monsanto Chemical Co Western Div 911 Western Av Seattle 4 Wash
Osmose Wood Preserving Co of America Inc Buffalo N Y
Pabco Products Inc 475 Brannan Ave San Francisco 19 Calif
Ira Parker & Sons Co Oshkosh Wis
Protection Products Mfg Co Kalamazoo 99 Mich
Protexol Corp 50 Market St Kenilworth 4 N J
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Standard Industrial Products Inc Box 325 Evansville 4 Ind
United States Plywood Corp 55 W 44th St NY 18 NY
Vaccinol Products Corp 2487 Penn Av Memphis 9 Tenn
C A Wood Preserver Co 6625 Delmar Blvd St Louis Mo
Wood Treating Chemicals Co 5137 Southwest Av Dept AL St Louis Mo

PREVENTIVES—sap stain

Abesto Mfg Corp Michigan City Ind
Breinig Bros Inc Hoboken N J
Chapman Chemical Co 707 Dermon Bldg Memphis 3 Tenn
Cre-O-Tex Chemical Co Memphis 12 Tenn
Dow Chemical Co Midland Mich
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Forman Ford & Co 111 S 2nd St Minneapolis 1 Minn
Nelsonite Chemical Products Inc 226 Scribner Ave N W Grand Rapids 2 Mich
Monsanto Chemical Co St Louis Mo
Protection Products Mfg Co Kalamazoo 99 Mich
Wilbur & Williams Co 130 Lincoln St Boston 35 Mass
Wood Treating Chemicals Co 5137 Southwest Av Dept AL St Louis 10 Mo
Wyandotte Chemical Corp Wyandotte Mich

PRICE CARDS—holders, mouldings

H A Dunning Westerly R I
L F Grammes & Sons Inc 396 Union Allentown Pa
W C Heller & Co Cat #40A 1050 Bryant St Montpelier Ohio
Hopp Press Inc 460 W 34 NY NY
Loxit Moulding Co 1217 W Washington Blvd Chicago 7 Ill
Macklanburg-Duncan Co Oklahoma City 1 Okla
Marsh Wall Products Inc Dept 441 Dover Ohio
Meilicke Systems Inc 3458-60 N Clark Chgo 13 Ill
R D Werner Co Inc 295 Fifth Av New York 16 N Y
F M Zimmerman Aurora Ill

PUBLICATIONS

American Home Magazine Corp 444 Madison Av NY 22 NY
Country Gentleman Independence Sq Philadelphia 5 Pa
Home Owners' Catalogs Dept GP2 119 W 40th St New York 18 N Y

PULLS—cabinet & drawer

Ajax Hardware Mfg Co Dept 2A 4251 Valley Blvd Los Angeles 32 Calif
Akron Hdwe Mfg Corp 32-01 57th St Woodside N Y
American Brass Goods Co Grand Rapids 2 Mich
American Cabinet Hdwe Corp Dept AL-47 Rockford Ill
Clinton Lock Co Clinton Ia
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Frantz Mfg Co Sterling Ill
Gregg & Son 25 Crown St Nashua N H
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis Mo
W C Heller & Co Cat 40A 1050 Bryant St Montpelier Ohio
Ideal Brass Wks Inc 250 E 5th St St Paul 1 Minn
H B Ives Co New Haven 8 Conn
F D Kees Mfg Co Beatrice Neb
Macklanburg-Duncan Co Oklahoma City 1 Okla
National Lock Co Rockford Ill
National Mfg Co Sterling Ill
Peabody Co Inc 5316 Hooper Av Los Angeles Calif

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Russell & Erwin Div The American Hdwe Corp New Britain Conn
Safe Padlock & Hdwe Co Lancaster Pa
Sager Lock Works North Chicago Ill
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Walter E Selck & Co 225 W Hubbard Chicago 10 Ill
Slaymaker Lock Co 105 W End Av Lancaster Pa
Standard Bronze Co Bayonne 8 N J
The Stanley Wks New Britain Conn
Technical Glass Co Inc 2050 E 48th St Los Angeles 58 Calif
Vimcar Sales Co 3001 E Pico Blvd Los Angeles 23 Cal
Waddell Mfg Co 1117 Taylor Av N W Grand Rapids 2 Mich
Westwood Mfg Co 1420 S Evergreen Av Los Angeles 23 Calif

PULLS—door

Adams-Rite Mfg Co 540 W Chevy Chase Dr Glendale 4 Cal
Ajax Hdwe Mfg Corp Dept 2A 4351 Valley Blvd Los Angeles 32 Cal
Akron Hdwe Mfg Corp 32nd Av & 57th St Woodside N Y
Champion Hardware Co Geneva Ohio
J Chesler & Sons Inc 41-49 Varick Av Brooklyn 6 N Y
Clinton Lock Co Clinton Ia
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Detroit Hdwe Mfg Co 1320 Mt Elliott Av Detroit 7 Mich
Frantz Mfg Co Sterling Ill
Griffin Mfg Co Erie Pa
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis Mo
H B Ives Co New Haven 8 Conn
F D Kees Mfg Co Beatrice Nebr
Chas O Larson Co Sterling Ill
Macklanburg-Duncan Co Oklahoma City 1 Okla
McKinney Mfg Co Pittsburgh Pa
National Brass Co Grand Rapids Mich
National Mfg Co Sterling Ill
National Lock Co Rockford Ill
Norwalk Lock Co 395 Broadway New York 13 N Y
Peabody Co Inc 5816 Hooper Av Los Angeles Calif
Phenix Mfg Co 4129 N Port Washington Rd Milwaukee 12 Wis
Russell & Erwin Div The American Hdwe Corp New Britain Conn
Safe Padlock & Hdwe Co Lancaster Pa
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Skillman Hardware Mfg Co 520 Edgewood Av Trenton 4 N J
Slaymaker Lock Co 105 W End Av Lancaster Pa
Standard Bronze Co Bayonne 8 N J
The Stanley Wks New Britain Conn
Technical Glass Co Inc 2050 E 48th St Los Angeles 58 Calif
Waddell Mfg Co 1117 Taylor Av N W Grand Rapids 2 Mich
Yale & Towne Mfg Co Stamford Conn

PUMPS—centrifugal

Aurora Pump Co 20 Dearborn St Aurora Ill
Decatur Pump Co Decatur 70 Ill
The Deming Co Salem O
Economy Pumps Inc Div of Hamilton Thomas Corp Hamilton O
Erie Pump & Engine Wks 145 Glenwood Av Medina N Y
Flint & Walling Mfg Co Inc Kendallville Ind
Lancaster Pump & Mfg Co Inc 118 W Chestnut St Lancaster Pa
Marlow Pumps 519 Greenwood Av Ridgewood N J (self priming)
A Y McDonald Mfg Co Dubuque Iowa
F E Myers & Bro Co Ashland Ohio
Red Jacket Mfg Co Davenport Ia

PUMPS—hand

Baker Mfg Co Evansville Wis
Butler Co Butler Ind
Deming Co Salem O
Dempster Mill Mfg Co Beatrice Neb
Flint & Walling Mfg Co Inc Kendallville Ind
Lancaster Pump & Mfg Co Inc 118 W Chestnut St Lancaster Pa
A Y McDonald Mfg Co Dubuque Iowa
F E Myers & Bro Co Ashland O
Red Jacket Mfg Co Davenport Ia
D B Smith 435 Main St Utica N Y

PUMPS—suction

C H & E Mfg Co 3849 N Palmer St Milwaukee 12 Wis
Chicago Pump Co 2336 W Wolfram Chgo Ill
Deming Co Salem Ohio
Dempster Mill Mfg Co Beatrice Nebr
Erie Pump & Engine Wks 145 Glenwood Av Medina N Y
Flint & Walling Mfg Co Inc Kendallville Ind
Lancaster Pump & Mfg Co Inc 118 W Chestnut St Lancaster Pa
A Y McDonald Mfg Co Dubuque Iowa
F E Myers & Bro Co Ashland Ohio
Wayne Home Equipment Co 801 Glasgow Av Ft Wayne Ind

PUMPS—sump

Aurora Pump Co 20 Dearborn St Aurora Ill
Crane Co 836 S Michigan Av Chicago 5 Ill
C H & E Mfg Co 3849 N Palmer St Milwaukee 12 Wis
Chicago Pump Co 2336 W Wolfram Chgo Ill
The Dayton Pump & Mfg Co 500 N Webster St Dayton 1 Ohio
Deming Co Salem O
Economy Pumps Inc Div of Hamilton-Thomas Corp Hamilton O
Everite Pump & Mfg Co Inc 617-19 N Prince Lancaster Pa
Fairbanks Morse & Co 600 S Michigan Av Chgo Ill
Flint & Walling Mfg Co Inc Kendallville Ind
Goulds Pumps Inc Seneca Falls N Y
Lancaster Pump & Mfg Co Inc 118 W Chestnut St Lancaster Pa
A Y McDonald Mfg Co Dubuque Iowa
F E Myers & Bro Co Ashland Ohio
Red Jacket Mfg Co Davenport Ia
Wayne Home Equipment Co 801 Glasgow Ave Ft Wayne Ind
Worthington Pump & Mchry Corp Harrison N J

PUMPS—water supply system

Aermotor Co 2500 W Rooseveit Rd Chicago 8 Ill
Aurora Pump Co Aurora Ill
Baker Mfg Co Evansville Wis
Chicago Pump Co 2336 W Wolfram Chgo Ill
Crane Co 836 S Michigan Ave Chicago 5 Ill
The Dayton Pump & Mfg Co 500 N Webster Dayton 1 Ohio
Decatur Pump Co Decatur Ill
Delco Appliance Div Gen'l Motor Sales Rochester N Y
Deming Co Salem O
Dempster Mill Mfg Co Beatrice Neb
Erie Pump & Engine Works 145 Glenwood Av Medina N Y
The Everite Pump & Mfg Co Inc 617-19 N Price St Lancaster Pa
Fairbanks Morse & Co 600 S Michigan Av Chgo Ill
Flint & Walling Mfg Co Kendallville Ind
Goulds Pumps Inc Seneca Falls N Y
Lancaster Pump & Mfg Co Inc 118 W Chestnut St Lancaster Pa
A Y McDonald Mfg Co Dubuque Iowa
F E Myers & Bro Co Ashland O
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Red Jacket Mfg Co Davenport Ia
Wayne Home Equipment Co 801 Glasgow Av Ft Wayne Ind
Worthington Pump & Mchry Corp Harrison N J

PUNCHES—center prick

American Swiss File & Tool Elizabeth N J
Baltimore Tool Works Baltimore 30 Md
Cincinnati Tool Co Norwood Cincinnati 12 Ohio
Crescent Tool Co Jamestown N Y
Damascus Steel Prod Corp Rockford Ill
Fairmount Tool & Forging Co Cleveland 6 Ohio
Heller Bros Co Newark 4 N J
Hood Bros 4326 Orchard St Philadelphia 24 Pa
Kraeuter & Co Inc Newark N J
L S Starrett Co Athol Mass
Mephisto Tool Co Inc Hudson NY
P & C Hand Forged Tool Co Portland 22 Ore
Plomb Tool Co 2209 Santa Fe Av Los Angeles 54 Calif
Rainey-Tool Grove City Pa
The Stanley Wks New Britain Conn
Tuck Mfg Co Brockton 39 Mass
Union Tool Co Orange Mass
United Wire Goods Mfg Co Inc 1150 Broadway N Y NY
Wilde Drop Forge & Tool Co Kansas City 8 Mo

PUSHERS—snow

American Fork & Hoe Co Cleveland O
Ames Baldwin Wyoming Co Parkersburg W Va
Farwell Ozmun Kirk & Co St Paul 1 Minn
F D Kees Mfg Co Box 8 Beatrice Nebr
Owosso Mfg Co Owosso Mich
Wirt & Knox Mfg Co Philadelphia 32 Pa

PUTTY

The Armstrong Co 4065 S LaSalle Chicago 9 Ill
Biddle Co 612 S Main St St Louis 2 Mo
Boyle-Midway Inc 22 E 40th St New York 16 N Y
Briggs Maroney Co Inc Everett Mass
Devoe & Raynolds Co Inc Dept A-5 787 First Av N Y 17 N Y
Dicks-Pontius Co 123 Wayne St Dayton O
Farwell Ozmun Kirk & Co St Paul 1 Minn
Felton Sibley & Co Inc 136 N 4th Philadelphia 6 Pa
Fort Pitt Chem Co 26th & Smallman St Pittsburgh 22 Pa
W P Fuller & Co 301 Mission San Francisco 19 Cal
The Glidden Co 11001 Madison Av Cleveland 2 Ohio
Gumputtie Laboratories 2221 S Archer Av Chicago 16 Ill
Landen Putty Works Malden Mass
The Las-Stik Mfg Co B & Wayne sts Hamilton Ohio
Macklanburg-Duncan Co Oklahoma City 1 Okla
Mar-Kay Mfg Co 2715 S Second St St Louis Mo
Ira Parker & Sons Co Oshkosh Wis
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Plastic Products Co 6467 Georgia Av Detroit Mich
Savogran Co Boston 10 Mass
Schaik Chem Co 351 E 2nd St Los Angeles 12 Cal
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill
Webb Products Co San Bernardino Cal
Geo D Wetherill & Co Philadelphia Pa

PUTTY—metal sash

The Armstrong Co 4065 S LaSalle Chicago 9 Ill
Biddle Co 612 S Main St St Louis 2 Mo
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Dicks-Pontius Co 123 Wayne St Dayton O
Gordon Chemical Co Inc 1700 Hickory St Kansas City 7 Mo
Gumputtie Laboratories 2221 S Archer Av Chgo 16 Ill
Landen Putty Wks Inc Malden Mass
Macklanburg-Duncan Co Oklahoma City 1 Okla
Mar-Kay Mfg Co 2715 S 2nd St St Louis Mo
Ira Parker & Sons Co Oshkosh Wis
Pecora Paint Co American & Venango Sts Philadelphia 40 Pa
Plastoid Prods Co 518 City Park Ave New Orleans 19 La
Plastic Products Co 6467 Georgia Av Detroit 11 Mich
Royal Glass Wks Corp 50-20 25th St Long Island City N Y
Steelcote Mfg Co 3418 Gratiot St Louis 3 Mo
Smooth-On Mfg Co 572 Communipaw Av Jersey City 4 N J

PUTTY—water

Boyle-Midway Inc 22 E 40th St New York 16 N Y
Donald Durham Co PO Box 804 Des Moines 4 Ia
G J Liebich Co 931 N Ogden Chicago 22 Ill
Reardon Co 2nd & Clinton Sts St Louis 6 Mo
The Savogran Co 25 Huntington Av Boston 16 Mass
Schaik Chemical Co 351 E Second St Los Angeles 12 Calif
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill
Warren Co Inc 905 Memorial Dr S E Atlanta 1 Ga

PUTTY SOFTENERS

Wm L Barrett Co 34 School St Bristol Conn
Fletcher Terry Co 592 South St Forestville Conn
Fort Pitt Chemical Co 26th & Smallman Sts Pittsburgh 22 Pa
Glaziers' Tool Mfg Corp 611 W Adams Chicago 6 Ill
U S Gypsum Co 300 W Adams St Chicago 6 Ill
Sta-Warm Electric Co Ravenna Ohio

QUICKLIME—pulverized

Kelley Island Lime & Transport Co 1122 Leader Bldg Cleveland 14 Ohio

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Mission Lime Products Corp 841 Ducommun St Los Angeles 12 Cal
National Gypsum Co Buffalo 2 N Y
Ohio Hydrate & Supply Co Woodville Ohio

RACKS—clothes

Acme Metal Goods Mfg Co Newark N J
Autoyre Co Oakville Conn
Chicago Curtain Stretcher Co 1127 W 37th Chgo 9 Ill
J R Clark Co Spring Park Minn
Gem Mfg Co North Girard Pa
Handy Things Mfg Co Ludington Mich
Knape & Vogt Mfg Co 658 Richmond St N W Grand Rapids 4 Mich
Marvel Rack Mfg Co 24 N 1st St Minneapolis 1 Minn
Universal Steel Equipment Corp 135 W 23rd NY NY

RACKS—fire hose

W D Allen Mfg Co 566 W Lake Chgo Ill
Beall Pipe & Tank Corp Portland Ore
Elkhart Brass Mfg Co Elkhart Ind
The Fyr-Fyter Co 221 Crane St Dayton 1 Ohio
Wirt & Knox Mfg Co Philadelphia 32 Pa

RAFTERS—glued Laminated

Rilco Laminated Products Inc 2521 First Natl Bk Bldg St Paul 1 Minn
Super-Structures Inc Albert Lea Minn
Tacoma Lumber Fabricating Co Tacoma 1 Wash
Timber Structures Inc Portland 8 Ore
Unit Structures Inc Peshtigo Wis
Weyerhaeuser Sales Co St Paul 1 Minn

RAILINGS—metal

Artcraft Ornamental Iron Co 724 E Hudson Columbus O
The Bellkool Co Dept 5026 Box 581 Appleton Wis
Belson Mfg Co 111 Franklin Aurora Ill
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
R G Coffman Co Inc 2809 N Orange Av Orlando Fla
Decatur Iron & Steel Co Decatur Ala
Fawsco Mfg Div of Falls Stamping & Welding Co 1701 Front St Cuyahoga Falls O
Hawkins Iron Co 319 N Fourth St Birmingham 4 Ala
Harvard Metal Products Inc 97-99 Reading St Roxbury 19 Mass
Locke Mfg Co Lodi O
Logan Co Inc Louisville 6 Ky (wrought iron)
Metal Crafters 1756 E Av NE Cedar Rapids Ia
Newman Bros Inc Dept A-L 660 4th St Cincinnati 3 Ohio
Wm J Samcoe Iron Co 917 Military Rd Kenmore 17 N Y
Stewart Iron Works Co Inc 1951 Stewart Block Cincinnati 1 Ohio (metal)
Valley Metal Products Marseilles Ill
R D Werner Co Inc 295 Fifth Ave New York 16 N Y

RAILINGS—wood

Angel Novelty Co 340 Broad St Fitchburg Mass
Cole Mfg Co PO Box 2657 Memphis 2 Tenn
Farley & Loetscher Mfg Co Dubuque Ia
Frost Lumber Industries Inc Shreveport La
Kinzua Pine Mills Co Kinzua Ore
Long-Bell Lbr Co R A Long Bldg Kansas City 6 Mo & Longview Wash
Morgan Co Oshkosh Wis

RANGES—electric

A-B Stoves Div Detroit-Michigan Stove Co Battle Creek Mich
Admiral Corp 3800 W Cortland Chgo 47 Ill
Crosley Corp Cincinnati O
Estate Stove Co Hamilton O
Excelsior Stove & Mfg Co Quincy Ill
Florence Stove Co Gardner Mass
Frigidaire Div General Motors Corp Dayton 1 Ohio
General Electric Co Schenectady 5 N Y
Hotpoint Inc 5600 W Taylor St Chicago 44 Ill
Kelvinator Div Nash-Kelvinator Corp 14250 Plymouth Rd Detroit 32 Mich
Landers Frary & Clark New Britain Conn
Murray Corp of America Scranton 2 Pa
Norge Div Borg Warner Corp 672 Woodbridge St Detroit 26 Mich
Westinghouse Electric Corp Dept G 10093-A 306 Fourth Av Pittsburgh 30 Pa

RANGES—gas

A-B Stoves Div Detroit-Michigan Stove Co Battle Creek Mich
Chambers Corp Dept ALT-452 Shelby-
Crown Stove Wks 4627 W 12th Pl Chicago 50 Ill
The Estate Stove Co Hamilton Ohio
Florence Stove Co Gardner Mass
Majestic Mfg Co 4550 Gustine St Louis 16 Mo (gas & coal combination)
Malleable Iron Range Co Beaver Dam Wis
Murray Corp of America Scranton 2 Pa
Perfection Stove Co 7609 Platt Av Cleveland O
Geo D Roper Corp Rockford Ill
Washington Stove Wks PO Box 919 Everett Wash

RANGES—wood & coal

Excelsior Stove & Mfg Co Quincy Ill
Gray & Dudley Co 2300 Clifton Rd Nashville 3 Tenn
King Stove & Range Co Sheffield Ala
Majestic Mfg Co 4550 Gustine St Louis 16 Mo
Malleable Iron Range Co Beaver Dam Wis
Washington Stove Wks PO Box 919 Everett Wash

REFRACTORIES—plastic

Acme Brick Co Fort Worth 2 Texas
Chicago Fire Brick Co 1461 N Elston Chgo 22 Ill
Commonwealth Plastics Inc Superior Plastics Div 426 N Oakley Blvd Chicago 12 Ill
Curtis Mfg & Asbestos Co 29 Lewis Wharf Boston 10 Mass
General Refractories Co Philadelphia Pa
A P Green Fire Brick Co Mexico Mo
Harbison Walker Refractories Co Farmers Bank Bldg Pittsburgh Pa
Mexico Refractories Co Mexico Mo
North American Refractories Co Cleveland 14 Ohio
Norton Co 1 New Bond St Worcester 6 Mass
Quigley Co Inc 527 Fifth Av New York 17 N Y
Pacific Clay Prods 306 W Av 26 Los Angeles 31 Cal
Seaboard Refractories Perth Amboy N J
Washington Brick & Lime Co Box 2198 Spokane 8 Wash

REFRIGERATORS—electric

Admiral Corp 3800 W Cortland Chgo 47 Ill
Coolerator Co Box 399 Duluth 1 Minn
Copeland Refrigeration Corp Sidney Ohio
Crosley Corp Cincinnati O
Frigidaire Div General Motors Corp Dayton 1 Ohio
General Air Conditioning Corp 4542 E Dunham St Los Angeles 23 Cal (gas stove combination)
General Electric Co Schenectady 5 N Y
General Refrigerator Corp 678 Broadway New York 12 N Y
Gibson Electric Refrigerator Corp Greenville Mich
Hotpoint Inc 5600 W Taylor St Chicago 44 Ill
Kelvinator Div Nash-Kelvinator Corp 14250 Plymouth Rd Detroit 32 Mich
Nash-Kelvinator Corp Detroit Mich
Norge Div Borg Warner Corp 672 E Woodbridge St Detroit 26 Mich
Warren Co Inc 905 Memorial Dr S E Atlanta 1 Ga
Westinghouse Elec Corp 306 4th Av Pittsburgh 30 Pa

REFRIGERATORS—gas

Servel Inc Evansville Ind

REGISTERS—heating & ventilating

Auer Register Co Cleveland O
Excelsior Stove & Mfg Co Quincy Ill
Forest City Foundries Co Cleveland O
Hart & Cooley Mfg Co Holland Mich
Krauser-Boyd Inc 553 River Rd N Tonawanda N Y
Leigh Building Products Div of Air Control Products Inc Coopersville Mich
Liberty Foundry Co St Louis Mo
Philadelphia Hdwe & Malleable Iron Wks Philadelphia Pa
U S Register Co 344 E Burnham St Battle Creek Mich

RESIN—synthetic

Barrett Div Allied Chemical & Dye Corp 40 Rector St New York 6 N Y
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Firestone Plastics Co Pottstown Pa
Industrial Chemical Sales Div West Virginia Pulp & Paper Co New York Central Bldg NY NY
The Mengel Co Inc Louisville 1 Ky
Monsanto Chemical Co St Louis Mo
National Casein Sales 601 W 80th St Chgo 20 Ill
Perkins Glue Co Lansdale Pa
Pittsburgh Plate Glass Co 2126 Grant Bldg Pittsburgh 19 Pa
Reilly Tar & Chemical Corp 1615 Merchants Bank Bldg Indianapolis 4 Ind
The Resinous Products & Chemical Co Philadelphia 5 Pa
Rohm & Haas Co Washington Sq Philadelphia 5 Pa
U S Mengel Plywoods Inc Box 1612 Louisville 1 Ky
United States Plywood Corp Dept 618 55 W 44th St New York 18 N Y
U S Rubber Co Avenue of the Americas New York 20 N Y

RIDGE ROLL

Alabama Metal Lath Co PO Box 992 Birmingham 1 Ala
American Sheet Metal Works 331 N Alexander St New Orleans La
Badger Corrugating Co LaCrosse Wis
Ceco Steel Products Corp 5001 W 26th Chgo 50 Ill
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Inland Steel Products Co 4027 W Burnham Milwaukee 1 Wis
LaCrosse Steel Roofing & Corrugating Co LaCrosse Wis
Nichols Wire & Aluminum Co Davenport Ia
Penn Supply & Metal Corp 1831 N 5th St Philadelphia 22 Pa
Republic Steel Corp Republic Bldg Cleveland 1 Ohio
Reeves Steel & Mfg Co Dover O
St Paul Corrugating Co St Paul 1 Minn
Wheeling Corrugating Co Wheeling W Va

ROLLOFF BODIES—truck

Beall Pipe & Tank Corp Portland Ore
Carter Mfg Co Memphis 2 Tenn
The R-B Company 1921 Guinotte Av Kansas City 1 Mo
A Streich & Bros Co Oshkosh Wis
Wentworth & Irwin Inc Portland 10 Ore

ROOF COATING

Abesto Mfg Corp Dept D3 Michigan City Ind
American Asphalt Roof Corp 7600 Truman Rd Kansas City 3 Mo
Barrett Div Allied Chem & Dye Corp 40 Rector NY 6 NY
Bird & Son Inc Dept AL-4 East Walpole Mass
Calbar Paint & Varnish Co 2612-26 N Martha St Philadelphia 25 Pa
Philip Carey Mfg Co Dept AL-4 Cincinnati 15 Ohio
Celotex Corp 120 S LaSalle Chicago 3 Ill
Cerasit Waterproofing Corp 3227 S Shields Ave Chicago 16 Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Chemical Supply Co 225 Plymouth Bldg Cleveland 15 Ohio (asphalt)
Devoe & Raynolds Co Inc 787 1st Av New York 17 N Y
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Empire Varnish Co 2636 E 76th St Cleveland 4 Ohio
The Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Glidden Co Cleveland 2 Ohio
Globe Roofing Prod Co Inc Whiting Ind
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
Johns-Manville Corp Box 290 22 E 40th N Y 16 N Y
Keystone Asphalt Products Co 101 E Superior St Chicago 11 Ill
Lastik Products Inc Keenan Bldg Pittsburg 22 Pa
Mar-Kay Mfg Co 2715 S 2nd St St Louis Mo
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 22 Pa
Reilly Tar & Chemical Corp 1615 Merchants Bank Bldg Indianapolis 4 Ind
The Ruberoid Co 500 Fifth Av NY 19 NY
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Tamko Asphalt Products Inc 601 N High Joplin Mo
The Texas Co 135 E 42nd NY NY

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

UNIVERSITY OF MICHIGAN LIBRARIES

United Gilsonite Laboratories Scranton 1 Pa
United States Gypsum Co 300 W Adams Chgo 6 Ill

ROOFING—asbestos

Asbestos Co of Texas P O Box 1082 Houston 1 Tex
The Philip Carey Mfg Co Dept AL-4 Cincinnati 15 Ohio
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Ehret Magnesia Mfg Co Valley Forge Pa
The Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Johns-Manville Sales Corp Box 290 22 E 40th New York 16 N Y
Keasley & Mattison Co Ambler Pa
Pabco Products Inc 475 Brannan St San Francisco 19 Calif
The Ruberoid Co 500 Fifth Av New York 18 N Y

ROOFING—asphalt roll

American Asphalt Roof Corp 7600 Truman Rd Kansas City 3 Mo
Asphalt Roofing Industry Bureau 2 West 45th St NY 19 NY
Barrett Div Allied Chem & Dye Corp 40 Rector NY 6 NY
Bird & Son Inc Dept AL-4 East Walpole Mass
Philip Carey Mfg Co Dept AL-4 Cincinnati 15 Ohio
Celotex Corp 120 S La Salle Chgo 3 Ill
Certain-teed Products Corp 120 E Lancaster Ave Ardmore Pa
Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Ford Roofing Products Co 188 W Randolph Chicago 1 Ill
Globe Roofing Prod Co Inc Whiting Ind
Johns-Manville Corp Box 290 22 E 40th N Y 16 N Y
Keystone Asphalt Products Co 101 E Ontario St Chicago 11 Ill
Koppers Co Inc Pittsburgh 19 Pa
Lehon Co 4425 S Oakley Chgo 9 Ill
Logan-Long Co 6600 S Central Av Chicago 38 Ill
B F Nelson Mfg Co Minneapolis 13 Minn
Ruberoid Co 500 Fifth Av New York 18 N Y
Tamko Asphalt Products Inc Joplin Mo
The Texas Co 135 E 42nd NY NY
United States Gypsum Co 300 W Adams Chgo 6 Ill

ROOFING—metal

Aluminum Co of America 827-D Gulf Bldg Pittsburgh 19 Pa (aluminum sheet)
American Steel & Wire Co U S Steel Corp Sub Rockefeller Bldg Cleveland 13 Ohio
Armco Steel Corp Middletown Ohio
Bethlehem Steel Company Bethlehem Pa (steel)
Carnegie Illinois Steel Corp U S Steel Corp Sub Carnegie Bldg Pittsburgh 30 Pa (steel)
Ceco Steel Products Corp 5601 W 26th St Chicago 50 Ill (steel)
Cheney Industries Trenton 5 N J (aluminum sheet & steel)
Cincinnati Sheet Metal & Roofing Co Cincinnati 2 Ohio (steel)
Columbia Steel Co Russ Bldg San Francisco 6 Calif (steel)
Continental Steel Corp Kokomo Ind (steel)
Detroit Steel Products Co Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
Cupples Co 401 S 7th St St Louis 2 Mo
Goldsmith Metal Lath Co Cincinnati 32 Ohio (steel)
Illinois Zinc Co 2959 W 47th St Chgo 32 Ill
Inland Steel Products Co (formerly Milcor Steel Co) 4027 W Burnham St Milwaukee 1 Wis
International Nickel Co Inc 67 Wall St New York 5 N Y (Monel)
Klauer Mfg Co Dubuque Iowa (steel)
LaCrosse Steel Roofing & Corrugating Co LaCrosse Wis
Mid-States Steel & Wire Co Crawfordsville Ind (steel)
New Holland Metals Co Dept L-451 Mountville Pa (aluminum sheet)
Nichols Wire & Aluminum Co Davenport Iowa (aluminum sheet & steel)
Permanente Products Co Kaiser Aluminum Div Kaiser Bldg Oakland 12 Calif
Reeves Steel & Mfg Co Dover Ohio
Republic Steel Corp Berger Mfg Div Canton 5 Ohio
Revere Copper & Brass Inc 230 Park Av New York 17 N Y
Reynolds Metal Co Building Products Section 2002 S 9th St Louisville 1 Ky (aluminum)
St Paul Corrugating Co St Paul Minn
Southern States Iron Roofing Co Savannah Ga (aluminum sheet & steel)
Tennessee Coal Iron & RR Co U S Steel Corp Sub Birmingham 2 Ala (steel)
Tiffin Art Metal Co Tiffin 16 Ohio (aluminum sheet & steel)
Truscon Steel Co Youngstown 1 Ohio
Wheeling Corrugating Co Wheeling W Va (steel)

ROOFING KNIVES

Black Panther Tool Co 401 N Broad St Philadelphia Pa
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
Modern Specialties Co 4140 W Harrison St Chicago 24 Ill

ROPE & TWINE

American Mfg Co Wood Noble & West St Brooklyn 22 N Y (twine only)
American Tent & Awning Co 1132 Mission St San Francisco 3 Cal
The Astrup Co 2937 W 25th St Cleveland 13 Ohio
Columbian Rope Co 309 Genesee St Auburn N Y
Cupples Co 401 S 7th St St Louis 2 Mo
John H Graham & Co Inc 105 Duane St NY 8 NY
Hoffman Lion Mills Inc Fall River Mass
Hosking Paper & Supply P O Drawer 43 Wilmette Ill
New Bedford Cordage Co 233 Broadway NY NY
Plymouth Cordage Co North Plymouth Mass
Puritan Cordage Mills Inc 1205 E Washington St Louisville 6 Ky
St Louis Cordage Mills St Louis Mo
Samson Cordage Wks 89 Broad St Boston 10 Mass
South Eastern Cordage NBC Bldg Cleveland 14 Ohio
Tubbs Cordage Co San Francisco Cal
Waterbury Rope Co 401 Park Av Brooklyn N Y
William B Whitaker Sedgley & Castor Aves Philadelphia 24 Pa
Whitlock Cordage Co 46 South N Y 5 N Y

ROPE—wire

American Steel & Wire Co 614 Superior Av Cleveland 13 Ohio
Bethlehem Steel Co Bethlehem Pa
Broderick & Bascom Rope Co 4203 N Union Blvd St Louis 15 Mo
Columbia Steel Co Russ Bldg San Francisco 6 Cal
Hazard Wire Rope Div American Chain & Cable Co Inc Wilkes-Barre Pa
Macwhyte Co Kenosha Wis
John A. Roebling's Sons Co Trenton N J
Tennessee Coal Iron & RR Co U S Steel Corp Sub Birmingham 2 Ala
Upson-Walton Co Cleveland O

RULES—board and log

Lufkin Rule Co Saginaw Mich
Stanley Tools Div of The Stanley Works 111 Elm St New Britain Conn

RULES—folding

Economy Novelty & Printing Co 225 W 39th St New York N Y
Eagle Rule Mfg Corp 517 Hunts Point Av New York 59 N Y
Keuffel & Esser Co Hoboken N J
Lufkin Rule Co Saginaw Mich
Master Rule Mfg Co Inc 201 Main St White Plains N Y
Stanley Tools Div of Stanley Works 111 Elm St New Britain Conn
L S Starrett Co Athol Mass
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
Warren-Knight Co 136 N 12th St Philadelphia 7 Pa

RULES—slide

Eugene Dietzgen Co 2425 N Sheffield Chgo Ill
Keuffel & Esser Co Hoboken N J
Pickett & Eckel Inc 5 S Wabash Av Chicago 3 Ill
L S Starrett Co Athol Mass
Union Tool Co Orange Mass (caliper)
Warren-Knight Co 136 N 12th St Philadelphia 7 Pa

RULES—steel

Brown & Sharpe Mfg Co 235 Promenade St Providence 1 R I
Carlson & Sullivan Inc 1714 S California Av Monrovia Calif
Economy Novelty & Prtg Co 225 W 39th St New York 18 N Y
Keuffel & Esser Co Hoboken N J
Lufkin Rule Co Saginaw Mich
Master Rule Mfg Co 201 Main St White Plains N Y
Millers Falls Co Greenfield Mass
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
The Stanley Wks New Britain Conn
L S Starrett Co Athol Mass
Union Tool Co Orange Mass

RUST PREVENTING & REMOVING COMPOUNDS

American Chemical Paint Co Ambler Pa
Samuel Cabot Inc 420 Oliver Bldg Boston 9 Mass
Camp Chemical Co Inc 2nd Av & 13th St Brooklyn 19 N Y
Carbozite Corp Greensburg Pa
Continental Asbestos & Refining Corp 1 Madison Ave New York 10 N Y
Devoe & Raynolds Co Inc 787 First Av N Y 17 N Y
R M Hollingshead Corp Camden N J
Murphy Paint Div Interchemical Corp 231 Grant Av East Newark N J
Nox-Rust Chemical Corp 2425 S Halsted Chgo 8 Ill
Oakite Products Inc 22 Thames New York 6 N Y
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
Pennsylvania Salt Mfg Co Philadelphia 7 Pa
Presstite Engineering Co 3900 Chouteau Av St Louis 10 Mo
Puritan Chemical Co Atlanta 3 Ga
Rusticide Products Co Cleveland 14 Ohio
The Simoniz Co Industrial Div 2100 S Indiana Av Chgo Ill
L Sonneborn Sons Inc Bldg Products Div 80 Eighth Av New York 11 N Y
Stop-Rust Co Chattanooga Tenn
Wilbur & Williams Co 130 Lincoln St Boston 35 Mass
X-Pando Corp 43-15 36th St Long Island City 1 N Y

SAND BLAST EQUIPMENT

American Wheelabrator & Equipment Co 737 S Byrkit St Mishawaka Ind
The Macleod Co 2236 Bogan St Cincinnati 22 Ohio
Paasche Airbrush Co 1909 W Diversey Pkwy Chicago 14 Ill

SANDER HEADS—brush backed

Arcade Mfg Co Freeport Ill
Ekstrom Carlson & Co 1400 Railroad Av Rockford Ill
Vonnegut Moulder Corp Indianapolis 2 Ind

SANDERS—belt, drum, spindle & disc

American Floor Surfacing Machine Co 521 St Clair St Toledo 3 Ohio
Black & Decker Mfg Co Dept H-640 Towson 4 Md
Boice Crane Co 930 W Central Av Toledo 6 Ohio
Chicago Pneumatic Tool Co 6 E 44th St New York 17 N Y (disc only)
Curtis Machine Corp 1300 E Second St Jamestown N Y
Delta Power Tool Div Rockwell Mfg Co 693-D E Vienna Av Milwaukee Wis
Ekstrom Carlson & Co 1417 Railroad Av Rockford Ill
Independent Pneumatic Tool Co Aurora Ill (belt only)
Mall Tool Co 7732 South Chicago Av Chicago 19 Ill
Milwaukee Electric Tool Corp 5364 W State St Milwaukee 8 Wis
Newman Bros Inc 660 W 4th St Cincinnati 3 Ohio
Oliver Machinery Co Grand Rapids Mich
Porter-Cable Machine Co 1714 N Salina St Syracuse 8 N Y
Reid-Way Inc Cedar Rapids Iowa
Shopmaster Inc 1214 S 3rd St Minneapolis 15 Minn
Stanley Works Tools Div of Stanley Works New Britain Conn
Walker-Turner Co Inc Plainfield N J
Yates-American Mach Co Beloit Wis

SANDERS—floor

American Floor Surfacing Mach Co 521 S St Clair St Toledo 3 Ohio
Atlas Floor Surfacing Mach Corp 248 E 34th NY 16 NY
Clarke Sanding Machine Co 464 Clay St Muskegon Mich

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Florboss-Habit Co 4181 W Montrose Chicago 14 Ill
Hilger Co St Cloud Minn
Holt Mfg Co 651 20th St Oakland 12 Calif
Lincoln-Schlueter Floor Mchy Co 512 S Peoria Chgo Ill
Porter-Cable Machine Co 1714 N Salina St Syracuse 8 N Y
Red Devil Tools Irvington 11 N J
Reid-Way Inc Cedar Rapids Iowa
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
Skilsaw Inc 5033 Elston Av Chicago 30 Ill
Walker-Turner Co Inc Plainfield N J

SANDERS—portable, electric

American Floor Surfacing Machine Co 521 S St Clair St Toledo 3 Ohio
Black & Decker Mfg Co Dept H-640 Towson 4 Md
Bradford Machine Tool Co 670 Evans St Cincinnati Ohio
Chicago Pneumatic Tool Co 6 E 44th St NY 17 NY
Clarke Sanding Machine Co 464 Clay St Muskegon Mich
Detroit Surfacing Machine Co 7433 W Davison Detroit 4 Mich
Dremel Mfg Co 2424 18th St Racine Wis
Mall Tool Co 7733 South Chicago Av Chicago 19 Ill
Millers Falls Co Greenfield Mass
Milwaukee Electric Tool Corp 5364 W State St Milwaukee 8 Wis
Portable Electric Tools Inc 335 W 83rd St Chgo 20 Ill
Porter-Cable Machine Co 1714 N Salina St Syracuse 8 N Y
Red Devil Tools Irvington 11 N J
Skilsaw Inc 5033 Elston Av Chicago 30 Ill
Speedway Mfg Co 1834 S 52nd Av Cicero 50 Ill
The Stanley Works 195 Lake St New Britain Conn
Syntron Co Homer City Pa

SANDING MACHINE DISCS

Abrasive Products Inc South Braintree Mass
American Floor Surfacing Machine Co. 521 S St Clair St Toledo 3 Ohio
Armour Sandpaper Works 1355 W 31st St Chicago 9 Ill
Behr-Manning Corp Troy N Y
Carborundum Co Niagara Falls N Y
Clarke Sanding Machine Co 464 Clay St Muskegon Mich
Hilger Co St Cloud Minn
Mid-West Abrasive Co 500 S Washington St Owosso Mich

SANDPAPER

Abrasive Prod Inc South Braintree Mass
Armour & Co 1355 W 31st St Chicago 9 Ill
Behr-Manning Corp Troy N Y
Carborundum Co Niagara Falls N Y
Clarke Sanding Machine Co 464 Clay St Muskegon Mich
Clover Mfg Co Norwalk Conn
Hilger Co St Cloud Minn
Mid-West Abrasive Co 500 S Washington St Owosso Mich
Minnesota Mining & Mfg Co St Paul 6 Minn
Red Devil Tools Irvington 11 N J
Sandpaper Inc Rockland Mass
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill

SASH—storm, metal

The Adams Co Dubuque Iowa
Alsco Inc Akron O
Ceco Steel Products Corp 5601 W 26th St Chgo 50 Ill
Compo-Miracle Prods Co Dept 1-12 15221 W 11 Mile Rd Berkley Mich
Detroit Steel Products Co AL-4 2269 E Grand Blvd Detroit 11 Mich
Feather-Lite Mfg Co 8205 Lyndon Av Detroit Mich
Hope's Windows Inc Jamestown N Y
Ingersoll Steel Div of Borg-Warner Corp 310 S Michigan Chicago 4 Ill
New Monarch Machine & Stamping Co Des Moines Iowa
Reynolds Metals Co Bldg Prods Div 2002 S 9th St Louisville Ky
Starline Inc Harvard Ill
Steelcraft Mfg Co 9017 Blue Ash Rd Rossmoyne O
Truscon Steel Co Youngstown 1 Ohio
L S Wilson Co 2300 S Western Av Chicago 8 Ill

SASH—storm wood

Angel Novelty Co Fitchburg Mass
Arrow Mfg Co P O Box 468 Independence Kansas
Brown Graves Co 191 E Miller Av Dept AL-103 Akron 1 Ohio
Carr Adams & Collier Co Dubuque Ia
Cole Mfg Co Box 2657 Memphis 2 Tenn
Continental Screen Co 1249 Washington Blvd Detroit 26 Mich
Curtis Companies Inc Clinton Ia
Farley & Loetscher Mfg Co Dubuque Ia
Feather-Lite Mfg Co 8205 Lyndon Ave Detroit Mich
Gregg & Son Nashua N H
Huttig Mfg Co Box AL Muscatine Iowa
Huttig Sash & Door Co 1206 S Vande-Long-Beli Lbr Co R A Long Bldg Kansas City 6 Mo & Longview Wash
Marquart Millwork Co Oshkosh Wis
Metal Window Service Co 4601 W 47th St Chicago 32 Ill
Moore Sash Co PO Box 420 Scottsbluff Nebr
Morgan Co Oshkosh Wis
Morgan Sash & Door Co 2287 S Blue Island Av Chicago 8 Ill
National Screen Door Co Montgomery 3 Ala
Northwest Door & Plywood Sales Tacoma 1 Wash
Phenix Mfg Co 4129 N Port Washington Rd Milwaukee 12 Wis
F W Prentice & Co Adrian Mich
Seneca Lumber & Millwork Co 635-701 W Tiffin St Fostoria Ohio
White Pine Sash Co Spokane 7 Wash

SASH BALANCES—adjustable

Caldwell Mfg Co 65 Commercial St Rochester 14 N Y
Defiance Metal Weatherstrip Co 109 W Water St Oak Harbor O
Duplex Inc 634 N LaPeer Dr Los Angeles 46 Cal
Grand Rapids Hdwe Co Grand Rapids Mich
Protex Weatherstrip Mfg Co 4508 S Western Chgo Ill
Pullman Mfg Corp 325 Hollenbeck St Rochester 21 N Y
Turner & Seymour Mfg Co Torrington Conn
Unique Balance Co Inc 25 Bruckner Blvd New York 54 N Y
Weatherproof Products Corp P O Box 8498 Waldo Station Kansas City Mo
Western Foundry Co Portland 1 Ore
Zegers Inc 8088 S Chicago Ave Chicago 17 Ill

SASH BALANCES—spiral

General Bronze Corp Alwintite Div Dept AL-4 801 Stewart Av Garden City N Y
Grand Rapids Hdwe Co Grand Rapids Mich
Milwaukee Stamping Co 800 S 72nd St Milwaukee 14 Wis
Unique Balance Co Inc 25 Bruckner Blvd NY 54 NY
Western Foundry Co Portland 1 Ore
Zegers Inc 8088 S Chicago Av Chicago 17 Ill

SASH BALANCES—spring

Acme Sash Balance Co 1626 Long Beach Av Los Angeles 21 Cal
Defiance Metal Weatherstrip Co Oak Harbor Ohio
Dorbin Metal Strip Mfg Co 2408 S Cicero Av Chicago 50 Ill
Duplex Inc 634 N LaPeer Dr Los Angeles 46 Cal
Grand Rapids Hdwe Co Grand Rapids Mich
Leidgen Specialty Co Oconomowoc Wis
Master Metal Strip Service Inc 1720 N Kilbourn Av Chicago 39 Ill
Protex Weatherstrip Mfg Co 4508 S Western Chicago Ill
Pullman Mfg Corp 325 Hollenbeck St Rochester 21 N Y
Star Sash Balance Corp Oak Harbor Ohio
Turner & Seymour Mfg Co Torrington Conn
Weatherproof Products Corp 329 Westport Rd Kansas City 2 Mo (metal)
Zegers Inc 8088 South Chicago Av Chgo 17 Ill

SASH CONTROL

Arrow Mfg Co PO Box 468 Independence Kans
P & F Corbin Div The American Hdwe Corp New Britain Conn
Leidgen Specialty Co Oconomowoc Wis
Lock-Joint Window Co 817 N W 61st St Oklahoma City 6 Okla
Roger Co Inc 3718 Chicago Ave Minneapolis 7 Minn
Rockford Sash Holder Inc 507 Empire Bldg Rockford Ill
J N Vikre Co Inc 3016 14th Av South Dept C Minneapolis Minn

SASH PULLEYS

Arcade Mfg Co Freeport Ill
Chantrell Hdwe & Tool Co Fitchburg Mass
Cleveland Lock Wks Div Consolidated Iron Steel Mfg Co. 1273 E 53rd St Cleveland 14 Ohio
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Grand Rapids Hdwe Co Grand Rapids 2 Mich
Grant Pulley & Hdwe Co 31-89 Whitestone Pkwy Flushing N Y
C Hager & Sons Hinge Mfg Co 139 Victory St St Louis Mo
Honeycutt Mfg Co Inc 2715 Oak St Kansas City 8 Mo
Phoenix Lock Co Newark 7 N J
Protex Weatherstrip Mfg Co 4508 S Western Chicago Ill
Russell & Erwin Div American Hdwe Corp New Britain Conn
The Stanley Wks New Britain Conn

SASH WEIGHTS

Belmont Smelting & Refining Wks Inc 330 Belmont Av Brooklyn N Y
Grey Iron Casting Co Mt Joy Pa
Industrial Iron Works 6011 S W Macadam Av Portland 2 Ore
Johnston & Jennings Co Cleveland O
Thayer Fdry Co Atchison Kan
Waterbury Fdry Co Waterbury Conn
Western Foundry Co 2400 S W Water Av Portland 1 Ore
Yonkers Sash Weight Corp Yonkers 1 N Y

SAW GUARDS

Beach Mfg Co Montrose Pa .
Delta Power Tool Div Rockwell Mfg Co 693-D E Vienna Av Milwaukee 1
DeWalt Inc 51 Fountain Av Lancaster Pa
J A Fay & Egan Co 2022 Eastern Av Cincinnati 22 Ohio
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Oliver Machinery Co Grand Rapids Mich
Yates-American Mach Co Beloit Wis

SAW MANDRELS

E C Atkins & Co 402 S Illinois St Indianapolis Ind
Belsaw Machinery Co 315 Westport Rd Kansas City 2 Mo
Consolidated Machinery & Supply Co Ltd 2029 Santa Fe Av Los Angeles 21 Calif
Corinth Machinery Co Corinth Miss
Cummingham Machinery Corp 735 Ricou St Shreveport La
J A Fay & Egan Co 2022 Eastern Av Cincinnati 22 Ohio
Frick Co Waynesboro Pa
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Lane Mfg Co Montpelier Vt
Prescott Co Menominee Mich
Wheland Co Chattanooga 2 Tenn
Yates American Mach Co Beloit Wis

SAW REPAIRS & ADJUSTMENTS

Chattanooga Saw Wks 1512 Williams Chattanooga Tenn
Corley Mfg Co Chattanooga 1 Tenn
DeWalt Inc 51 Fountain Av Lancaster Pa
Foley Mfg Co 3300 Fifth Ave N E Minneapolis 18 Minn
R Hoe & Co Inc 910 E 138th St NY 54 NY
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Miner & Son Saw Works Shreveport 90 La
J H Miner Saw Mfg Co Dept A Meridian Miss

SAW SETS

E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Belsaw Machinery Co 315 Westport Rd Kansas City 2 Mo
Henry Disston & Sons Inc 425 Tacony Philadelphia Pa
Hanchett Mfg Co Big Rapids Mich
R Hoe & Co Inc 910 E 138th St NY 54 NY
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Sandvik Saw & Tool Corp 47 Warren NY 7 NY
Simonds Saw & Steel Co Fitchburg Mass
The Stanley Wks New Britain Conn
Yates-American Mach Co Beloit Wis

SAW SHARPENING MACHINES

Belsaw Machinery Co 315 Westport Rd Kansas City 2 Mo
Chattanooga Saw Wks 1512 Williams

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Chattanooga Tenn
Foley Mfg Co 3300 Fifth St N E Minneapolis 18 Minn
Hanchett Mfg Co Big Rapids Mich
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Prescott Co Menominee Mich
Reed-Prentice Corp Worcester 4 Mass (chain)
Wardwell Mfg Co Cleveland 9 O
Yates-American Mach Co Beloit Wis

SAW SWAGES & SHAPERS

E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Belsaw Machinery Co 315 Westport Rd Kansas City 2 Mo
Foley Mfg Co 3300 Fifth Ave N E Minneapolis 18 Minn
Hanchett Mfg Co Big Rapids Mich
R Hoe & Co Inc 910 E 138th St New York 54 N Y
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Simonds Saw & Steel Co Fitchburg Mass

SAWMILL DOGS

Allis Chalmers Mfg Co Milwaukee Wis
American Saw Mill Mchry Co Hackettstown N J
Belsaw Machinery Co 315 Westport Rd Kansas City 2 Mo
Corinth Machinery Co Corinth Miss
Corley Mfg Co Chattanooga 1 Tenn
Cunningham Machinery Corp 735 Ricou St Shreveport La
The Filer & Stowell Co 147 E Becher St Milwaukee 7 Wis
Frick Co Dept 75 Waynesboro Pa
R R Howell Co Minneapolis 14 Minn
Kent Machine Co 117 Portage St Cuyahoga Falls Ohio
Lane Mfg Co Montpelier Vt
Prescott Co Menominee Mich
The Wheland Co Chattanooga 2 Tenn

SAWS—band

Allis Chalmers Mfg Co Milwaukee Wis
American Saw Mill Mchry Co Hackettstown N J
E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Boice Crane Co 930 W Central Ave Toledo 6 Ohio
Chattanooga Saw Wks 1512 Williams Chattanooga Tenn
Chicago Saw Wks Inc 5039 Wentworth Ave Chicago 9 Ill
Consolidated Machinery & Supply Co Ltd 2031 Santa Fe Av Los Angeles 21 Calif
Delta Power Tool Div Rockwell Mfg Co 693-D E Vienna Av Milwaukee 1 Wis
Henry Disston & Sons Inc 425 Tacony Philadelphia Pa
J A Fay & Egan Co 2022 Eastern Av Cincinnati 22 Ohio
Heston & Anderson Div St Paul Fdry & Mfg Co 606 W Kirkwood St Fairfield Iowa
R Hoe & Co Inc 910 E 138th St New York 54 N Y
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Layfette Saw & Knife Inc 87 Guernsey Brooklyn 22 N Y
Oliver Machinery Co Grand Rapids 2 Mich
Parks Woodworking Mach Cincinnati O
Rockwell Tools Inc 1314 Kennear Rd Columbus 8 Ohio
Shopmaster Inc 1214 S 3rd St Minneapolis 15 Minn
Simonds Saw & Steel Co Fitchburg Mass
L S Starrett Co Athol Mass
Walker Turner Div Kearney & Trecker Corp Plainfield N J
J D Wallace & Co 134 S California Ave Chicago 12 Ill
S A Woods Machine Co Boston 27 Mass
Yates-American Mach Co Beloit Wis

SAWS—bench

American Saw Mill Mchry Co Hackettstown N J
E C Atkins & Co 402 S Illinois St Indianapolis Ind
Beach Mfg Co Montrose Pa
Consolidated Machinery & Supply Co Ltd 2029 Santa Fe Av Los Angeles 21 Calif
Delta Power Tool Div Rockwell Mfg Co 693-D E Vienna Ave Milwaukee 1 Wis
Oliver Machinery Co Grand Rapids 2 Mich
Parks Woodworking Machine Co Cincinnati O
Simonds Saw & Steel Co Fitchburg Mass
Walker Turner Co Inc Plainfield N J
J D Wallace & Co 134 S California Av Chicago 12 Ill
Wilson Saw Div Media Machine Works Inc Media Pa
Yates-American Machine Co Beloit Wis

SAWS—bucking

E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Cummings Machine Works 9 Melcher Boston 10 Mass
Henry Disston & Sons Inc 425 Tacony Philadelphia Pa
Gensco Tool Div General Steel Warehouse Co Inc 1812 N Kostner Ave Chicago 39 Ill
Homelite Corp Port Chester N Y
Harry A Lowther Co 141 W Jackson Blvd Chgo 4 Ill
Mall Tool Co 7733 South Chicago Av Chgo 19 Ill
Mill & Mine Supply Co Seattle 4 Wash
Rockwell Tools Inc 1314 Kinnear Rd Columbus 8 Ohio
Sandvik Saw & Tool Corp 47 Warren New York 7 N Y
Simond Saw & Steel Co Fitchburg Mass

SAWS—chamfering

E C Atkins & Co 402 S Illinois St Indianapolis Ind
Henry Disston & Sons Inc 425 Tacony Philadelphia Pa
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Walker-Turner Div Kearney & Trecker Corp Plainfield N J

SAWS—circular

American Saw Mill Mchry Co Hackettstown N J
E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Boice Crane Co 930 W Central Av Toledo 6 Ohio
Buckeye Saw Co 552 W McMicken Av Cincinnati Ohio
Chattanooga Saw Wks 1512 Williams Chattanooga Tenn
Chicago Saw Works Inc 5039 Wentworth Av Chicago 9 Ill
Corley Mfg Co Chattanooga 1 Tenn
Delta Power Tool Div Rockwell Mfg Co 693-D E Vienna Av Milwaukee 1 Wis
DeWalt Inc 51 Fountain Av Lancaster Pa
Henry Disston & Sons Inc 425 Tacony Philadelphia 35 Pa
Heston & Anderson Div St Paul Foundry & Mfg Co P O Box 431 Fairfield Ia
R Hoe & Co Inc 910 E 138th St New York 54 N Y
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Layfette Saw & Knife Inc 87 Guernsey Brooklyn 22 N Y
Mall Tool Co 7733 South Chicago Av Chicago 19 Ill
The Master Woodworker Mfg Co Inc 409 E Fort Detroit 26 Mich
Media Machine Works Inc Media Penna
J H Miner Saw Mfg Co Dept A Meridian Miss
Parks Woodworking Machine Co Cincinnati O
PTI Inc 401 Broadway New York 13 N Y
Rockwell Tools Inc 1314 Kinnear Rd Columbus 8 Ohio
Shopmaster Inc 1214 S 3rd St Minneapolis 15 Minn
Simonds Saw & Steel Co Fitchburg Mass
Walker-Turner Div Kearney & Trecker Corp Plainfield N J
Yates-American Mach Co Beloit Wis

SAWS—circular dado

American Saw Mill Mchry Co Hackettstown N J
E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Beach Mfg Co Montrose Pa
Boice-Crane Co 930 W Central Ave Toledo 6 Ohio
Chattanooga Saw Wks 1512 Williams Chattanooga Tenn
Chicago Saw Works Inc 5039 Wentworth Av Chicago 9 Ill
Delta Power Tool Div Rockwell Mfg Co 693-D E Vienna Av Milwaukee 1
DeWalt Inc 51 Fountain Av Lancaster Pa
Henry Disston & Sons Inc 425 Tacony Philadelphia Pa
J A Fay & Egan Co 2022 Eastern Av Cincinnati 22 Ohio
Heston & Anderson Div St Paul Foundry & Mfg Co P O Box 431 Fairfield Ia
R Hoe & Co Inc 910 E 138th St NY 54 NY
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Layfette Saw & Knife Inc 87 Guernsey Brooklyn 22 N Y
Mall Tool Co 7733 So Chicago Av Chicago 19 Ill
Media Machine Works Inc Media Penna
Porter Cable Machine Co 1714 N Salina Syracuse 8 N Y
Rockwell Tools Inc 1314 Kinnear Rd Columbus 8 Ohio
Simonds Saw & Steel Co Fitchburg Mass
Walker-Turner Div Kearney & Trecker Corp Plainfield N J
Yates-American Mach Co Beloit Wis

SAWS—cutoff

American Saw Mill Mchry Co Hackettstown N J
E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Chattanooga Saw Wks 1512 Williams Chattanooga Tenn
Chicago Saw Works Inc 5039 Wentworth Ave Chicago 9 Ill
Corinth Machinery Co Corinth Miss
Corley Mfg Co Chattanooga 1 Tenn
Delta Power Tool Div Rockwell Mfg Co 693-D E Vienna Av Milwaukee 1
Henry Disston & Sons Inc 425 Tacony Philadelphia Pa
J A Fay & Egan Co 2022 Eastern Av Cincinnati 22 Ohio
Frick Co Dept 75 Waynesboro Pa
Heston & Anderson Div St Paul Foundry & Mfg Co 606 W Kirkwood St Fairfield Iowa
R Hoe & Co Inc 910 E 138th St New York 54 N Y
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Layfette Saw & Knife Inc 87 Guernsey Brooklyn 22 N Y
Oliver Machinery Co Grand Rapids Mich
C O Porter Machinery Co 666-668 Front Av N W Grand Rapids 4 Mich
Rockwell Tools Inc 1314 Kinnear Rd Columbus 8 Ohio
Sandvik Saw & Tool Corp 47 Warren New York 7 N Y
Simonds Saw & Steel Co Fitchburg Mass
Stetson-Ross Mach Co Seattle 4 Wash
Walker-Turner Div Kearney & Trecker Corp Plainfield N J
J D Wallace & Co 153 S California Av Chicago 12 Ill
S A Woods Machine Co Boston 27 Mass
Yates-American Mach Co Beloit Wis

SAWS—grooving

American Saw Mill Mach Co Hackettstown N J
E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Beach Mfg Co Montrose Pa
Chattanooga Saw Wks 1512 Williams Chattanooga Tenn
Chicago Saw Works Inc 5039 Wentworth Ave Chicago 9 Ill
DeWalt Inc 51 Fountain Av Lancaster Pa
Henry Disston & Sons Inc 425 Tacony Philadelphia Pa
J A Fay & Egan Co 2022 Eastern Av Cincinnati 22 Ohio
R Hoe & Co Inc 910 E 138th St NY 54 NY
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Layfette Saw & Knife Inc 87 Guernsey Brooklyn 22 N Y
Misener Mfg Co Inc Syracuse N Y
Oliver Machinery Co Grand Rapids Mich
Rockwell Tools Inc 1314 Kinnear Rd Columbus 8 Ohio
Simonds Saw & Steel Co Fitchburg Mass
Walker-Turner Co Inc Plainfield N J
Wilson Saw Div Media Machine Works Inc Media Pa
S A Woods Machine Co Boston 27 Mass
Yates-American Mach Co Beloit Wis

SAWS—hand

American Saw & Mfg Co Springfield Mass
E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Buckeye Saw Co 552 W McMicken Av Cincinnati Ohio
Henry Disston & Sons Inc 425 Tacony Philadelphia Pa
John H Graham & Co 105 Duane St New York 8 N Y
Rockwell Tools Inc 1314 Kinnear Rd Columbus 8 Ohio
Sandvik Saw & Tool Corp 47 Warren Av New York 7 N Y
Simonds Saw & Steel Co Fitchburg Mass

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

SAWS—hack

E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Champion Blower & Forge Co Lancaster Pa
Crescent Tool Co Jamestown N Y
Henry Disston & Sons Inc 425 Tacony Philadelphia Pa
Forsberg Mfg Co Bridgeport 1 Conn
Mephisto Tool Co Inc Hudson N Y
Millers Falls Co Greenfield Mass
Parker Mfg Co Worcester Mass
Proto Tools 2209 Santa Fe Av Los Angeles 54 Calif
Simonds Saw & Steel Co Fitchburg Mass
L S Starrett Co Athol Mass

SAWS—hole

Bradford Machine Tool Co 670 Evans St Cincinnati Ohio
Circo Tool Co Milwaukee 3 Wis
Millers Falls Co Greenfield Mass
Misener Mfg Co Inc Syracuse 2 N Y

SAWS—inserted tooth circular

American Saw Mill Machinery Co Hackettstown N J
E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Chattanooga Saw Wks Chattanooga Tenn
De Walt Inc 51 Fountain Av Dept AL-4 Lancaster Pa
Henry Disston & Sons Inc 425 Tacony Philadelphia Pa
R Hoe & Co Inc 910 E 138th NY 54 NY
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
E T Lippert Saw Co 608 Lincoln Av Pittsburgh 9 Pa
Miner & Son Saw Works Shreveport 90 La
J H Miner Saw Mfg Co Dept A Meridian Miss
Simonds Saw & Steel Co Fitchburg Mass
The Wheland Co Chattanooga 2 Tenn
Yates-American Mach Co Beloit Wis

SAWS—jig

Boice Crane Co 930 W Central Av Toledo 6 Ohio
Delta Power Tool Div Rockwell Mfg Co 693-D E Vienna Av Milwaukee 1
Henry Disston & Sons Inc 425 Tacony Philadelphia Pa
E T Lippert Saw Co 608 Lincoln Av Pittsburgh 9 Pa
Parker Mfg Co 149 Washington St Worcester 1 Mass
Shopmaster Inc 1214 S 3rd St Minneapolis 15 Minn
Walker-Turner Div Kearney & Trecker Corp Plainfield N J

SAWS—mitre

American Saw Mill Machinery Co Hackettstown N J
E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Bradford Machine Tool Co 670 Evans St Cincinnati Ohio
Brooklyn Saw & Knife Inc 87 Guernsey Brooklyn 22 N Y
Chicago Saw Works Inc 5039 Wentworth Av Chicago 9 Ill
DeWalt Inc 51 Fountain Av Lancaster Pa
Henry Disston & Sons Inc 425 Tacony Philadelphia Pa
R Hoe & Co Inc 910 E 138th St N Y 54 N Y
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Media Machine Works Inc 632 Park Av Media Pa
Milwaukee Electric Tool Corp 5364 W State St Milwaukee 8 Wis
Porter-Cable Machine Co 1714 N Salina St Syracuse 8 N Y
Rockwell Tools Inc 1314 Kinnear Rd Columbus 8 Ohio
Simonds Saw & Steel Co Fitchburg Mass
Walker-Turner Co Inc Plainfield N J
J D Wallace & Co 153 S California Chicago 12 Ill

SAWS—portable electric

American Floor Surfacing Machine Co 521 S St Clair St Toledo 3 Ohio
American Saw Mill Machinery Co Hackettstown N J
Black & Decker Mfg Co Dept H-640 Towson Md
Bradford Machine Tool Co 670 Evans St Cincinnati Ohio
Chicago Pneumatic Tool Co 6 E 44th St NY 17 NY
Consolidated Machinery & Supply Co Ltd 2031 Santa Fe Av Los Angeles Calif
DeWalt Inc Dept AL-4 51 Fountain Av Lancaster Pa
Dremel Mfg Co 2424 18th St Racine Wis
Goldblatt Tool Co 1924 Walnut St Kansas City 6 Mo
Independent Pneumatic Tool Co Aurora Ill
Mall Tool Co 7733 South Chicago Av Chgo 19 Ill
Millers Falls Co Greenfield Mass
Milwaukee Electric Tool Corp 5364 W State St Milwaukee 8 Wis
Portable Electric Tools Inc 335 W 83rd St Chgo 20 Ill
Porter-Cable Machine Co 1714 N Salina St Syracuse 8 N Y
RCS Tool Sales Corp PO Box 1434 Joliet Ill
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
Skilsaw Inc 5033 Elston Av Chicago 30 Ill
Syntron Co Homer City Pa
The Vulcan Iron Works Co Denver 2 Colo
J D Wallace & Co 153 S California Chicago 12 Ill

SAWS—power, tree falling & log bucking

E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Cummings Machine Works 9-11 Melcher Boston 10 Mass
Henry Disston & Sons Inc 425 Tacony Philadelphia Pa
Hansen Mach & Supply Co 820 Broadway Eureka Cal
Homelite Corp Port Chester N Y
Harry A Lowther Co Joliet Ill
Mall Tool Co 7733 South Chicago Av Chgo 19 Ill
Mill & Mine Supply Co Seattle 4 Wash
Ottawa Mfg Co Ottawa Kansas
Reed-Prentice Corp Worcester 4 Mass
The Vulcan Iron Works Co Denver 2 Colo
Witte Engine Works Div of Oil Well Sup Co U S Steel Corp Sub Kansas City 3 Mo

SAWS—radial

American Saw Mill Mchry Co Hackettstown N J
Consolidated Machinery & Supply Co Ltd 2031 Santa Fe Av Los Angeles 21 Calif
Construction Machinery Co Waterloo Iowa
Delta Power Tool Div Rockwell Mfg Co 693-DE Vienna Av Milwaukee 1 Wis
DeWalt Inc Dept AL-4 51 Fountain Av Lancaster Pa
Media Machine Works Inc 632 Park Av Media Pa
Porter-Cable Machine Co 1714 N Salina St Syracuse 8 N Y
Skilsaw Inc 5033 Elston Av Chicago 30 Ill
Walker-Turner Div Kearney & Trecker Corp Plainfield N J
J D Wallace & Co 134 S California Av Chicago 12 Ill

SAWS—rip

E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Buckeye Saw Co 552 W McMicken Av Cincinnati Ohio
Chattanooga Saw Wks 1512 Williams Chattanooga Tenn
Chicago Saw Works Inc 5039 Wentworth Av Chicago 9 Ill
Corley Mfg Co Chattanooga 1 Tenn
Dependable Machine Co Inc Greensboro N C
DeWalt Inc 51 Fountain Av Lancaster Pa
Henry Disston & Sons Inc 425 Tacony Philadelphia 35 Pa
J A Fay & Egan Co 2022 Eastern Av Cincinnati 22 Ohio
Hermance Machine Co 1st & Campbell Sts Williamsport Pa
R Hoe & Co Inc 910 E 138th St New York 54 N Y
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Media Machine Wks Inc 632 Park Av Media Pa
Milwaukee Electric Tool Corp 5364 W State St Milwaukee 8 Wis
Newman Machine Co Greensboro N C
Porter-Cable Machine Co 1714 N Salina St Syracuse 8 N Y
Rockwell Tools Inc 1314 Kinnear Rd Columbus 8 Ohio
Simonds Saw & Steel Co Fitchburg Mass
Walker-Turner Div Kearney & Trecker Corp Plainfield N J
J D Wallace & Co 153 S California Av Chicago 12 Ill
Yates-American Mach Co Beloit Wis

SAWS—solid tooth circular

E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Chattanooga Saw Wks 1512 Williams Chattanooga Tenn
Chicago Saw Works Inc 5039 Wentworth Av Chicago 9 Ill
DeWalt Inc 51 Fountain Av Lancaster Pa
Henry Disston & Sons Inc 425 Tacony Philadelphia Pa
R Hoe & Co Inc 910 E 138th NY 54 NY
Huther Bros Saw Mfg Co Inc 1290 University Av Rochester 7 N Y
Layfette Saw & Knife Inc 87 Guernsey Brooklyn 22 N Y
Miner & Son Saw Works Shreveport 90 La
J H Miner Mfg Co Dept A Meridian Miss
Rockwell Tools Inc 1314 Kinnear Rd Columbus 8 Ohio
Sandvik Saw & Tool Corp 47 Warren New York 7 N Y
Simonds Saw & Steel Co Fitchburg Mass
The Wheland Co Chattanooga 2 Tenn
Yates-American Mach Co Beloit Wis

SAWS—swing

American Saw Mill Machinery Co Hackettstown N J
C H & E Mfg Co 3849 N Palmer St Milwaukee 12 Wis
Corley Mfg Co Chattanooga Tenn
Henry Disston & Sons Inc 425 Tacony Philadelphia Pa
J A Fay & Egan Co 2022 Eastern Av Cincinnati 22 Ohio
The Filer & Stowell Co 147 E Becher St Milwaukee 1 Wis
Frick Co Waynesboro Pa
Heston & Anderson Div St Paul Fdry & Mfg Co 606 W Kirkwood St Fairfield Ia
R Hoe & Co Inc 910 E 138th St New York 54 N Y
Power Tool Div Rockwell Mfg Co 600 E Vienna Av Milwaukee 1 Wis
The Tannewitz Wks Grand Rapids 4 Mich
Wheland Co Chattanooga 2 Tenn
S A Woods Machine Co Boston 27 Mass
Yates-American Machine Co Beloit Wis

SAWS—tilting arbor table

American Saw Mill Machinery Co Hackettstown N J
Boice Crane Co 930 W Central Av Toledo 6 Ohio
Consolidated Machinery & Supply Co Ltd 2031 Santa Fe Av Los Angeles 21 Calif
Construction Machinery Co Waterloo Ia
J A Fay & Egan Co 2022 Eastern Av Cincinnati 22 Ohio
Delta Power Tool Div Rockwell Mfg Co 693-D E Vienna Av Milwaukee Wis
Greenlee Bros & Co 12th & Columbia Av Rockford Ill
Oliver Machinery Co Grand Rapids Mich
St Paul Fdry & Mfg Co St Paul 3 Minn
Shopmaster Inc 1214 S 3rd St Minneapolis 15 Minn
Walker-Turner Div Kearney & Trecker Corp Plainfield N J
J D Wallace & Co 134 S California Ave Chicago 12 Ill
Baxter D Whitney & Son Inc Winchendon Mass
Yates-American Mach Co Beloit Wis

SCAFFOLDS

American Ladder Co 5505 N W 7th Av Miami Fla
Breyer Bros Whiting & Co Waupun Wis
J R Clark Co Spring Park Minn
Goldblatt Tool Co 1924 Walnut St Kansas City 6 Mo
The Goshen Mfg Co 10th & Reynolds Sts Goshen Ind
Louisville Metal Products Co 1101 W Oak St Louisville 10 Ky
Marvel Equipment PO Box 665 Oshkosh Wis
Moulton Ladder Mfg Co Somerville Mass
Newark Ladder & Bracket Co Inc Clark (Rahway) N J
Patent Scaffolding Co Inc 1550 Dayton St Chicago Ill
John S Tilley Ladders Co Inc Watervliet N Y

SCALES—counter

Buffalo Scale & Mfg Co Inc Buffalo 13 N Y
John Chatillon & Sons 85 Cliff St New York 38 N Y
Colloid Equipment Co Inc 50 Church St NY 7 NY

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

UNIVERSITY OF WISCONSIN LIBRARIES

Dayton Scale Co Dayton O
Detecto Scales Inc 540 Park Av Brooklyn 5 N Y
The Exact Weight Scale Co Columbus Ohio
Fairbanks Morse & Co 600 S Michigan Av Chgo Ill
Hanson Scale Co 525 N Ada Chicago 22 Ill
Howe Scale Co Rutland Vt
Toledo Scale Co Toledo O
Triner Scale & Mfg Co 2714 W 21st Chgo Ill

SCALES—moisture content, lumber

Colloid Equipment Co Inc 50 Church St NY 7 NY
Detecto Scales Inc 540 Park Av Brooklyn 5 N Y
Exact Weight Scale Co Columbus O
Fairbanks Morse & Co 600 S Michigan Av Chgo Ill
Moore Dry Kiln Co 1220 W State St Jacksonville 1 Fa
Toledo Scale Co Toledo Ohio

SCALES—platform, warehouse

American Scale Co 919 Baltimore Av Kansas City 6 Mo
Bonded Scale & Machine Co 19 Belleview Av Columbus 7 Ohio
Buffalo Scale & Mfg Co Inc Buffalo 13 N Y
Dayton Scale Co Dayton O
Detecto Scales Inc 540 Park Av Brooklyn 5 N Y
The Exact Weight Scale Co Columbus Ohio
Fairbanks Morse & Co 600 S Michigan Av Chgo Ill
Hanson Scale Co 525 N Ada Chgo 22 Ill
Howe Scale Co Rutland Vt
Toledo Scale Co Toledo O

SCHOOLS—correspondence

Chicago Technical College 2000 S Michigan Av Chicago Ill
Commercial Trades Inst Dept D73-4 1400 W Greenleaf Av Chicago 26 Ill
International Correspondence Schools Box 4245-B Scranton 9 Pa

SCRAPERS—foot

C Hager & Sons Hinge Mfg Co 139 Victory St St Louis 4 Mo
Lawrence Bros Sterling Ill
Metal Crafters 1756 E Av N E Cedar Rapids Ia
National Mfg Co Sterling Ill
Richards-Wilcox Mfg Co Aurora Ill
Standard Bronze Co Bayonne 8 N J

SCRAPERS—wood

E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Black Panther Tool Co 401 N Broad St Philadelphia 8 Pa
Henry Disston & Sons Inc 425 Tacony Philadelphia Pa
Fletcher Terry Co 592 South St Forestville Conn
Glaziers' Tool Mfg Corp 611 W Adams Chicago 6 Ill
Heller Brothers Co Newark 4 N J
Millers Falls Co Greenfield Mass
Red Devil Tools Irvington 11 N J
Sandvik Saw & Tool Corp 47 Warren St NY 7 NY
Warner Mfg Co 801 16th Av S E Minneapolis 14 Minn

SCREEDS—base

Alabama Metal Lath Co P O Box 992 Birmingham Ala
Ceco Steel Products Corp 5601 W 26th St Chgo 50 Ill
Inland Steel Products Co (formerly Milcor Steel Co) 4027 W Burnham St Milwaukee Wis
Penn Metal Co Inc 205 E 42nd St NY 17 NY
Richmond Screw Anchor Co Inc 816 Liberty Av Brooklyn 8 N Y
Stanley Tools Div of The Stanley Works 111 Elm St New Britain Conn
Truscon Steel Co Youngstown 1 Ohio
Wheeling Corrugating Co Wheeling West Virginia

SCREEN CLOTH—plastic

The Dow Chemical Co Midland Mich
Firestone Plastics Co Pottstown Pa
Lumite Div Chicopee Mills Inc 40 Worth St NY 13 NY
Plastic Woven Products 51 Camden St Paterson N J

SCREEN WIRE

Ace Window Screen Co of America 1634 S Pulaski Rd Chgo 23 Ill
American Brass Co Waterbury Conn
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Clinton Wire Cloth Co Clinton Ia
Colorado Fuel & Iron Corp Wickwire Spencer Steel Div 500 Fifth Av New York 18 N Y
Cyclone Fence Div American Steel & Wire Co U S Steel Corp Sub Box 260 Waukegan Ill
Driver-Harris Co Harrison N J
Gilbert & Bennett Mfg Co Blue Island Ill
Hanover Wire Cloth Div Continental Copper & Steel Industries Inc 612 Frock St Hanover Pa
C O Jelliff Mfg Corp Southport Conn
Keystone Wire Cloth Co Dept D14 Hanover Pa
Metal Window Service Co 4601 W 47th St Chicago 32 Ill (aluminum)
New York Wire Cloth Co 63 Park St New Canaan Conn
Nichols Wire & Aluminum Co Davenport Ia
Pennwoven Inc 70 E 45th St NY 17 NY
Pequot Wire Cloth Co Inc So Norwalk Conn
John A Roebling's Sons Co Trenton N J
Royal Glass Works Corp 50-20 25th St Long Island City N Y
F P Smith Wire & Iron Works Inc 2340 Clybourn Av Chicago 14 Ill
Southern Metal Products Corp 921 Rayner St Memphis Tenn
Standard Wire Cloth & Screen Co York Pa
Wickwire Bros Inc Cortland N Y

SCREENS—door & window, metal frame

A B C Steel Equip Co Inc 205-215 E 22nd St NY 10 NY
Alumatic Corp of America 2081 S 56th St Milwaukee 14 Wis (aluminum)
A W Barnhart Co Port Chester N Y
Ceco Steel Products Corp 5601 W 26th St Chgo 50 Ill
Compo-Miracle Products Co Dept 1-12 15221 W 11 Mi Rd Berkley Mich
Continental Screen Co 1249 Washington Blvd Detroit 26 Mich
Copco Steel & Engineering Co 14035 Grand River Av Detroit 27 Mich
W J Dennis & Co 4444 W Irving Park Chgo Ill
Detroit Steel Products Co Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
General Bronze Corp Alwintite Div Dept AL-4 801 Stewart Av Garden City N Y
Hope's Windows Inc Jamestown NY
Ingersoll Steel Div Borg Warner Corp 310 S Michigan Av Chgo 4 Ill
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Ludman Corp Dept 2Y Box 4541 Miami Fla
Metal Arts Mfg Co PO Box 4144 Atlanta 2 Ga
Metalcraft Co Boston 20 Mass
Metal Products Corp Hardware Div "W" 807 NW 20th St Miami 37 Fla
New Monarch Mach & Stamping Co Des Moines Ia
Protex Weatherstrip & Mfg Co 4508 S Western Av Chicago 9 Ill
Reynolds Metals Co Bldg Products Section 2002 S Ninth St Louisville 1 Ky
Rudiger-Lang Co 2701 8th St Berkeley 10 Calif (window only)
F C Russell Co 1100 Chester Av Dept 7-AL-42 Cleveland 1 Ohio
Screens & Fabricated Metals Corp 3323 Paterson Plank Rd North Bergen N J
Security Co—Security Sash & Screen Co 385 Midland Detroit 3 Mich
Truscon Steel Co Youngstown 1 Ohio (window only)
Universal Fabricators 1801 Boone Av Bronx 60 N Y
L S Wilson Mfg Co 2300 S Western Av Chicago 8 Ill
Winter-Seal Corp-Hayes Wolverine Corp 14575 Meyers Rd & 8525 Livernois Detroit Mich

SCREENS—door & window, wood frame

American Sash & Door Co Kan City Mo
Carr Adams & Collier Co Dubuque Ia
Cole Mfg Co emphis Tenn
Compo-Miracle Products Co Dept 1-12 15221 W 11 Mi Rd Berkley Mich
Continental Screen Co 1249 Washington Blvd Detroit 26 Mich
Crossett Lbr Co Crossett Ark
Curtis Cos Inc Clinton Ia
W J Dennis & Co 4444 W Irving Park Chgo Ill
Farley & Loetscher Mfg Co Dubuque Iowa
Fordyce Lumber Co Fordyce Ark
Gen'l Woodcraft Co Inc North Bergen N J
A D Hemphill Co 129 S Franklin St Lake City Minn
Huttig Mfg Co Box AL Muscatine Ia
Kinzua Pine Mills Co Kinzua Ore
Marquart Millwork Co Oshkosh Wis
Morgan Sash & Door Co 2287 S Blue Island Av Chicago 8 Ill
National Screen Co Inc Suffolk Va (Window Screen Frames, K.D.)
National Screen Door Co Montgomery 3 Ala
New York Wire Cloth Co 63 Park New Canaan Conn
Pacific Mutual Door Co Tacoma Wash
Phenix Mfg Co 4129 N Port Washington Rd Milwaukee 12 Wis
F W Prentice & Co Adrian Mich
Rock Island Millwork Co Rock Island Ill
Royal Glass Works Corp 50-20 25th St Long Island City N Y
F C Russell Co Dept 7-AL-42 1100 Chester Av Cleveland 1 Ohio
F E Schumacher Co Hartville O
Seneca Lumber & Millwork Co 635-701 W Tiffin St Fostoria Ohio
West Coast Screen Co 1127 E 63rd St Los Angeles 1 Cal
White Pine Sash Co Spokane 7 Wash

SCREENS—electric for doors & windows

Detjen Corp Electric Fly Screen Div 303 W 42nd St New York 18 N Y
Electric Fly Screen Co Inc 430 W Hoffman Av PO Box 188 Lindenhurst L I NY
Gardner Mfg Co Horicon Wis
Harvard Electric Co 2608 W Flournoy Chgo Ill
National Electric Fly Screen Co Inc 303 W 42nd St NY 18 NY

SCREENS—fireplace

Bennett-Ireland 449 Pine St Norwich N Y
Chamberlin Co of America 1254 La-Brosse St Detroit 32 Mich
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
S M Howes Inc P O Box 1 Fall River Mass
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Sheffield Mfg Co 119 W 25 NY NY
F P Smith Wire & Iron Works 2340 Clybourn Av Chicago 14 Ill
John P Smith Co New Haven Conn
Superior Fireplace Co 1708 East 15th St Dept AL-521 Los Angeles 21 Calif and 601 North Point Road Dept AL-521 Baltimore 6 Md

SCREENS—rolling window

Kane Mfg Corp Kane Pa
Keystone Wire Cloth Co Dept D14 Hanover Penn
Lockhart Mfg Co 6350 E Davison Av Detroit 12 Mich
Metalcraft Co Boston 20 Mass
Rudiger-Lang Co 2701 8th St Berkeley 10 Calif
Rolscreen Co Pella Ia
Universal Roller Screen Co 2055 N Racine Av Chgo Ill

SCREENS—sun deflector

Chamberlin Co of America 1254 La-Brosse St Detroit 32 Mich
General Bronze Corp Alwintite Div Dept AL-4 801 Stewart Av Garden City N Y
Ingersoll Steel Div Borg Warner Corp 310 S Michigan Av Chgo 4 Ill
Kane Mfg Corp Kane Pa
Rudiger-Lang Co 2701 8th St Berkeley 10 Calif
Warp Bros 1100 N Cicero Av Chgo 51 Ill

SCREENS—tension

Columbia Mills Inc 225 Fifth Av New York N Y
Keystone Wire Cloth Co Dept D-14 Hanover Pa
Lockhart Mfg Corp 6350 E Davison Av Detroit 12 Mich
New York Wire Cloth Co 63 Park St New Canaan Conn
Royal Glass Works Corp 50-20 25th St Long Island City N Y
Rudiger-Lang Co 2701 8th St Berkeley 10 Calif

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Southern Metal Products Corp 921 Rayner St Memphis Tenn
Standard Wire Cloth & Screen Co York Pa

SCREW DRIVERS

Black & Decker Mfg Co Dept H-640 Towson 4 Md
Crescent Tool Co Jamestown N Y
Fairmont Tool & Forging Co 10611 Quincy Av Cleveland Ohio
Forsberg Mfg Co Bridgeport 1 Conn
Glaziers' Tool Mfg Corp 611 W Adams Chicago 6 Ill
Mall Tool Co 7733 S Chicago Av Chicago 19 Ill
Mayhew Steel Prods Inc Shelburne Falls Mass
Mephisto Tool Co Inc Hudson NY
Millers Falls Co Greenfield Mass
North Bros Mfg Co Philadelphia Pa
Owatonna Tool Co Owatonna Minn
Ox-Wall Tool Co 928 Broadway New York 10 N Y
P & C Hand Forged Tool Co Portland 22 Ore
Peck Stow & Wilcox Co Southington Conn
Proto Tools 2209 Santa Fe Av Los Angeles 54 Calif
Rainey-Tool Grove City Pa
Rugol Co 176 Franklin St New York 13 N Y
Skilsaw Inc 5033 Elston Av Chicago 30 Ill
Slaymaker Lock Co 105 W End Av Lancaster Pa
Stanley Tools Div of Stanley Works 111 Elm St New Britain Conn
Union Hdwe Co Torrington Conn
United Wire Goods Mfg Co Inc 1150 Broadway NY NY

SCREW DRIVERS—portable electric

Black & Decker Mfg Co Dept H-640 Towson Md
Chicago Pneumatic Tool Co 6 E 44 NY NY
Glaziers' Tool Mfg Co 611 W Adams Chicago 6 Ill
Independent Pneumatic Tool Co Aurora Ill
Mall Tool Co 7733 South Chicago Av Chicago 19 Ill
Millers Falls Co Greenfield Mass
Stanley Electric Tools 111 Elm New Britain Conn
Syntron Co Homer City Pa
U S Electrical Tool Co Cincinnati 14 O

SCREW DRIVERS—ratchet

Greenlee Tool Co Div of Greenlee Bros & Co 2136 12th St Rockford Ill
Millers Falls Co Greenfield Mass
North Bros Mfg Co Philadelphia Pa
Ox-Wall Tool Co 928 Broadway New York 10 N Y
Stanley Tools Div of The Stanley Works 111 Elm St New Britain Conn

SCREWS—brass & bronze

American Screw Co Providence R I
Bridgeport Brass Co Bridgeport Conn
Clark Bros Bolt Co Milldale Conn
The Eagle Lock Co Terryville Conn
Elco Tool & Screw Corp 1800 Broadway Rockford Ill
Gensco Tool Div General Steel Warehouse Co Inc 1812 N Kostner Ave Chicago 39 Ill
Independent Nail & Packing Co Bridgewater Mass
The Lamson & Sessions Co 1971 W 85th St Cleveland 2 Ohio
National Lock Co Rockford Ill
Pheoll Mfg Co 5700 Roosevelt Rd Chgo 50 Ill
Rockford Screw Products Co 2501 9th St Rockford Ill
St Louis Screw & Bolt Co 6900 N Broadway St Louis 15 Mo
Stronghold Screw Products Inc 222 W Hubbard St Chicago 10 Ill
United Screw & Bolt Corp Cleveland 2 O

SCREWS—wood

American Screw Co Providence R I
Atlantic Screw Works Hartford Conn
Chase Brass & Copper Co 235 Grand St Waterbury 20 Conn
Continental Screw Co New Bedford Mass
Elco Tool & Screw Corp 1800 Broadway Rockford Ill
Gensco Tool Div General Steel Warehouse Co Inc 1812 N Kostner Ave Chicago 39 Ill
National Lock Co Rockford Ill
Natl Screw & Mfg Co Cleveland O
Paine Co 2951 Carroll Av Chicago 12 Ill
S Parker Hdwe Mfg Corp 27 Ludlow St NY 2 NY
Pheoll Mfg Co 5700 W Roosevelt Rd Chgo 50 Ill
Reed & Prince Mfg Co Worcester Mass
Rockford Screw Prods Co 2501 9th St Rockford Ill
Southern Screw Co 142 Rickert St Statesville N C
Stronghold Screw Products Inc 222 W Hubbard St Chicago 10 Ill

SET GRATES—cast iron

The Adams Co Dubuque Iowa
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Western Foundry Co 2400 S W Water Av Portland 1 Ore

SHADES—window

Aeroshade Co Waukesha Wis
Bills Venetian Blind Co 5459 Lake Park Av Chgo 15 Ill
Chas W Breneman Co 2045 Reading Rd Cincinnati 2 Ohio
Clopay Corp Cincinnati O
Columbia Mills Inc 225 5th Av NY NY
Columbus Coated Fabrics Corp Seventh & Grant Aves Columbus 16 Ohio
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Hough Shade Corp Janesville Wis
Stewart Hartshorn Co 250 Fifth Av NY 1 NY

SHAKES—cedar, processed and hand split

American Stained Shingle Co Columbus Ohio
Canadian Forest Products Ltd Hunting-Merritt Shingle Div 9110 Milton St Vancouver B C
Capilano Timber Co Ltd Box 608 Vancouver B C Can
Colonial Cedar Co 600 W Nickerson St Seattle 99 Wash
Creo-Dipt Co Inc 986 Oliver St Dept AL-42 North Tonawanda N Y
Douglas Fir Wholesalers Inc Shingle & Shake Mill Div PO Box 906 Marysville Wash
Fiddes Moore & Co 4950 State Line Av Hammond Ind
Jamison Lbr & Shingle Co Everett Wash
Northwest Cedar Products Ltd 881 River Rd Lulu Island Vancouver B C
Olympic Stained Products Co 1118 Leary Way Seattle Wash
Perma Products Co 5455 Broadway Av Cleveland 4 Ohio
Portland Shingle Co 9036 N Denver Av Portland 3 Ore
Puget Sound Cedar Sales Co Lloyd Bldg Seattle 1 Wash
Weyerhaeuser Sales Co St Paul 1 Minn

SHEATHING—asbestos cement

Asbestos Asphalt & Insulation Inc 2100 Fullerton Av Chicago 47 Ill
Celotex Corp 120 S La Salle Chgo 3 Ill
Davis Plywood Corp 12555 Berea Rd Cleveland 11 Ohio
Johns-Manville Corp Box 290 22 E 40th N Y N Y
Keasbey & Mattison Co Ambler Pa
National Gypsum Co Buffalo 2 N Y
Ruberoid Co 500 Fifth Av New York 18 N Y

SHEATHING—asphalt rigid board

Asbestos Asphalt Insulation Inc 2100 Fullerton Av Chicago 47 Ill
Celotex Corp 120 S La Salle Chgo 3 Ill
Certain-teed Products Corp 120 E Lancaster Ardmore Pa
The Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Insulite Div Minnesota & Ontario Paper Co 500 Baker Arcade Bldg Minneapolis 2 Minn
Johns-Manville Corp Box 290 22 E 40th New York 16 N Y
Keystone Asphalt Products Co 101 E Ontario St Chicago 11 Ill
B F Nelson Mfg Co Minneapolis 13 Minn
Protective Papers Inc Union Ill
The Ruberoid Co 500 Fifth Av New York 18 N Y

SHEATHING—fiber board

Armstrong Cork Co 4704 Ocean Av Lancaster Pa
Celotex Corp 120 S La Salle Chgo 3 Ill
The Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Forest Fiber Products Co Box 68 Dept B Forest Grove Ore
Homasote Co Dept 50-A Trenton 3 N J
Insulite Division Minnesota & Ontario Paper Co Baker Arcade Bldg Minneapolis 2 Minn
Johns-Manville Corp Box 290 22 E 40th New York 16 N Y
National Gypsum Co Buffalo 2 N Y (Insulation)
Plastergon Wallboard Co P O Box 40 Sta B Buffalo 7 N Y
Simpson Logging Co 1065 Stuart Building Seattle 1 Wash
United States Gypsum Co 300 W Adams Chgo 6 Ill
Wood Conversion Co First Natl Bank Bldg Dept 120-42 St Paul 1 Minn

SHEATHING—gypsum

Celotex Corp 120 S La Salle Chgo 3 Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Grand Rapids Plaster Co Grand Rapids 2 Mich
National Gypsum Co Buffalo 2 N Y
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
Schumacher Wall Board Corp South Gate Calif
United States Gypsum Co 300 W Adams Chgo 6 Ill

SHEATHING—insulating

Armstrong Cork Co 4704 Ocean Av Lancaster Pa
Barrett Div Allied Chemical & Dye Corp 40 Rector NY 6 NY
Philip Carey Mfg Co Dept AL-4 Cincinnati 15 Ohio
Celotex Corp 120 S La Salle Chgo 3 Ill
Fiddes Moore & Co 4950 State Line Av Hammond Ind
The Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Homasote Co Dept 50-A Trenton 3 N J
Insulite Division Minnesota & Ontario Paper Co Baker Arcade Bldg Minneapolis 2 Minn
Johns-Manville Corp Box 290 22 E 40th New York 16 N Y
National Gypsum Co Buffalo 2 N Y
Plastergon Wall Board Co Box 40 Sta B Buffalo 7 N Y
Protective Papers Inc Union Ill
Simpson Logging Co 1065 Stuart Bldg Seattle 1 Wash
U S Mengel Plywoods Inc Box 1612 Louisville 1 Ky
United States Gypsum Co 300 W Adams St Chicago 6 Ill
United States Plywood Corp Dept 615 55 W 44th St New York 18 N Y
Wood Conversion Co First Natl Bank Bldg Dept 120-42 St Paul 1 Minn

SHEATHING—lumber

See lumber section beginning page 678

SHEETS—aluminum, steel, etc.

Aluminum Co of America 827-D Gulf Bldg Pittsburgh 19 Pa
Badger Corrugating Co La Crosse Wis
Bethlehem Steel Co Bethlehem Pa (steel)
Ceco Steel Products Corp 5601 W 26th St Chicago 50 Ill
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Cincinnati Sheet Metal & Roofing Co Cincinnati 2 Ohio
Illinois Zinc Co 2959 W 47th St Chicago 32 Ill
Inland Steel Products Co 4027 W Burnham St Milwaukee 1 Wis
LaCrosse Steel Roofing & Corrugating Co LaCrosse Wis
New Holland Metals Co Dept L-651 Mountville Pa
Resolite Corp Zelienople Penna (plastic)
Reynolds Metals Co Bldg Products Section 2002 S 9th St Louisville 1 Ky
Rigidized Metals Corp 658 Ohio St Buffalo 3 N Y
Wheeling Corrugating Co Wheeling W Va
Youngstown Sheet & Tube Co Youngstown 1 Ohio (steel)

SHELLAC

Devoe & Raynolds Co Inc 787 1st Av New York 17 N Y
Lowe Bros Co 424 E 3rd St Dayton 2 Ohio
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
Pittsburgh Plate Glass Co PO Box 911 Pittsburgh 22 Pa
Valentine & Co Inc 11 E 36 New York 16 N Y
Wellman Products Co 1444 E 49th St Cleveland 3 Ohio
Woodfinishing Products Co 34 Industrial St N Y 61 N Y
William Zinseer & Co Inc 516 W 59th St New York 19 N Y

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

UNIVERSITY OF MICHIGAN LIBRARIES

SHELVING—adjustable shelf

The Adams Co Dubuque Iowa
A G Busch & Co Inc 2632 N Central Av Chgo 39 Ill
W C Heller & Co Cat #40A 1050 Bryant St Montpelier O
Johnswood Co 13833 S Indiana Chicago 27 Ill
Macklanburg-Duncan Co Oklahoma City 1 Okla

SHELVING—glass

Autoyre So Oakville Conn
W C Heller & Co Cat #40A 1050 Bryant St Montpelier O
Royal Glass Works Corp 50-20 25th St Long Island City N Y

SHELVING—steel

The Adams Co Dubuque Iowa
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Deluxe Metal Furniture Co Warren Pa
Equipto Div of Aurora Equipment Co 412 Cleveland Av Aurora Ill
Excel Metal Cabinet Co Jamestown NY
Frick-Gallagher Mfg Co 250 S Broad St Philadelphia 2 Pa
Johnson Metal Products Co Erie Pa
Republic Steel Corp Berger Mfg Div Canton 5 Ohio
Ruslander & Sons Inc 18 Letchworth St Buffalo 13 N Y
Sommer Metalcraft Corp Crawfordsville Ind
Stackbin Corp Providence R I

SHELVING—wood

Carr & Moehl Co Des Moines 9 Iowa
Cole Mfg Co PO Box 2657 Memphis 2 Tenn
Engineered Plywood Products Co P O Box 1326 Tacoma Wash (plywood)
Frick-Gallagher Mfg Co Wellston Ohio
W C Heller & Co Cat #40A 1050 Bryant St Montpelier O
Edward Hines Lumber Co Chicago 2 Ill
J G Kennedy Lbr Co 4416 White-Henry-Stuart Building Seattle 1 Wash
Kinzua Pine Mills Co Kinzua Ore
The Long-Bell Lbr Co R A Long Bldg Kansas City 6 Mo & Longview Wash
Marquart Millwork Co Oshkosh Wis
Mauk-Seattle Lbr Co Skinner Bldg Seattle 1 Wash
Morgan Co Oshkosh Wis
E A Vandy Co 14105 Merchandise Mart Chicago 54 Ill

SHIELDS—expansion bolt

Arro Expansion Bolt Co Box 388 Marion Ohio
Chicago Expansion Bolt Co 1338 W Concord Place Chicago 22 Ill
P & F Corbin Div American Hdwe Corp Park St New Britain Conn
Diamond Expansion Bolt Co Garwood N J
J D Polis Mfg Co 3437 W Ogden Chicago 23 Ill
Star Expansion Products Co Inc 147 Cedar St NY 6 NY

SHINGLES—asbestos cement

Asbestone Corp 5300 Tchoupitoulas St New Orleans 15 La
Asbestos Asphalt Insulation Inc 2100 Fullerton Av Chicago 47 Ill
Celotex Corp 120 S La Salle Chgo 3 Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Johns-Manville Corp Box 290 22 E 40th New York 16 N Y
Keasbey & Mattison Co Ambler Pa
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
The Ruberoid Co 500 Fifth Av N Y 18 N Y

SHINGLES—asphalt

American Asphalt Roof Corp 7600 Truman Rd Kansas City 3 Mo
Asbestos Asphalt Insulation Inc 2100 Fullerton Av Chicago 47 Ill
Asphalt Roofing Industry Bureau 2 West 45th St NY 19 NY
Barrett Div Allied Chemical & Dye Corp 40 Rector N Y 6 N Y
Bird & Son Inc Dept AL-4 East Walpole Mass
Celotex Corp 120 S LaSalle St Chicago 3 Ill
Certain-teed Prod Corp 120 E Lancaster Av Ardmore Pa
Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Ford Roofing Products Co 188 W Randolph Chicago 1 Ill
Globe Roofing Prod Co Inc Whiting Ind
Johns-Manville Corp Box 290 22 E 40th New York 16 N Y
Lehon Co 4425 S Oakley Chicago 9 Ill
Logan-Long Co 37 W Van Buren St Chicago 5 Ill
B F Nelson Mfg Co Minneapolis Minn
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
The Ruberoid Co 500 Fifth Av NY 18 NY
Tamko Asphalt Products Inc Joplin Mo
The Texas Co 135 E 42 NY NY
U S Gypsum Co 300 W Adams Chicago 6 Ill

SHINGLES—galvanized steel

Badger Corrugating Co La Crosse Wis
Ceco Steel Products Corp 5601 W 26th St Chgo 50 Ill
Cincinnati Sheet Metal & Roofing Co Cincinnati 2 Ohio
Inland Steel Products Co 4027 W Burnham Milwaukee 1 Wis
LaCrosse Steel Roofing & Corrugating Co LaCrosse Wis
Republic Steel Corp Berger Mfg Div Canton 5 Ohio
Wheeling Corrugating Co Wheeling W Va

SHINGLES—red cedar

Acme Shingle Co Ltd 3961 Shaughnessy Vancouver B C Canada
S A Agnew Lbr Co Centralia Wash
Aloha Lbr Co Aloha Wash
American Stained Shingle Co 381 Spruce St Dept B Columbus 8 Ohio
Bestwood Cedar Shingle Co Ltd Barnet B C
Bloedel Stewart & Welch Ltd Vancouver B C
British Columbia Forest Products Ltd 1022 Metropolitan Bldg Vancouver B C
Butler McDougall Mfg Co Ltd Vancouver B C
Canadian Forest Products Ltd Hunting-Merritt Shingle Division Vancouver B C
Canadian Western Lbr Co Ltd Fraser Mills B C
Capilano Timber Co Ltd Vancouver B C
A F Coats Lbr Co Tillamook Ore
Colonial Cedar Co 600 W Nickerson St Seattle 99 Wash
Creo-Dipt Co Inc Dept AL-42 North Tonawanda N Y
Crescent Shingle Co Kelso Wash
Douglas Fir Wholesalers Inc Shingle & Shake Mill Div PO Box 906 Marysville Wash
Eatonville Lbr Co Eatonville Wash
Fiddes Moore & Co 4950 State Line Av Hammond Ind
Flavelle Cedar Ltd Port Moody B C
Fluhrer Bros Astoria Ore
Gray Lbr & Shingle Co Seattle Wash
Robert Gray Cedar Lbr Co Inc Hoquiam Wash
Hammond Cedar Co Ltd Hammond B C
Horne Bros Shingle Co Ltd No Vancouver B C
Horton Cedar Mfg Co Ltd Victoria B C
Wm Hulbert Mill Co Everett Wash
Hunting-Merritt Shingle Co Ltd Vancouver B C
Jamison Lbr & Shingle Co Everett Wash
J G Kennedy Lbr Co 4416 White-Henry-Stuart Bldg Seattle 1 Wash
Leyboid-Smith Shingle Co Tacoma Wash
The Long-Bell Lumber Co R A Long Bldg Kansas City 6 Mo & Longview Wash
Marona Mill Co Acme Wash
Mauk-Seattle Lbr Co Skinner Bldg Seattle 1 Wash
McCarter Shingle Co 2418 Rock Bay Av Victoria BC Canada
Robt McNair Shingle Co Ltd Vancouver B C
Newberg Shingle Co Lacomb Ore
Northwest Cedar Products Ltd 881 River Rd Lulu Island Vancouver B C
Olympic Stained Products Co 1118 Leary Way Seattle Wash
Pacific Timber Co Everett Wash
Perma Products Co 5455 Broadway Av Cleveland O
Phoenix Shingle Co Seattle Wash
Portland Shingle Co 9030 N Denver Av Portland 3 Ore
Quality Shingle Co Edmonds Wash
Rainier Mill Co Rainier Ore
Red Cedar Shingle Bureau 5510 White Bldg Seattle 1 Wash
Riverside Shingle Mills Ltd Box 569 New Westminster B C
Saginaw Shingle Co Aberdeen Wash
Seattle Cedar Lbr Mfg Co Seattle Wash
Geo J Silbernagel 8 S Michigan Av Chicago 8 Ill
M R Smith Lumber & Shingle Co White Henry Stuart Bldg Seattle Wash
Stave Lake Cedar Ltd Dewdney B C
Super Mill Co 14th St Dock Everett Wash
Twin Harbors Lbr Co Aberdeen Wash
Weyerhaeuser Sales Co St Paul 1 Minn

SHINGLES—redwood

Fiddes Moore & Co 4950 State Line Av Hammond Ind
Perma Products Co 5455 Broadway Av Cleveland O
Geo J Silbernagel 8 S Michigan Av Chicago 3 Ill
Union Lumber Co 620 Market San Francisco Calif

SHINGLES—stained

American Stained Shingle Co 381 Spruce St Dept B Columbus 8 Ohio
Canadian Forest Products Ltd Hunting-Merritt Shingle Div 9110 Milton St Vancouver B C
Colonial Cedar Co 600 W Nickerson St Seattle 99 Wash
Creo-Dipt Co Inc Dept AL-42 North Tonawanda N Y
Dyke Bros Little Rock Ark
Fiddes Moore Co 4950 State Line Av Hammond Ind
Jamison Lbr & Shingle Co Everett Wash
Mauk-Seattle Lbr Co Skinner Bldg Seattle 1 Wash
Olympic Stained Products Co 1118 Leary Way Seattle Wash
Perma Products Co 5455 Broadway Av Cleveland O
Geo J Silbernagel 8 S Michigan Av Chicago 3 Ill
Weatherbest Corp No Tonawanda N Y
Weyerhaeuser Sales Co St Paul Minn

SHUTTERS—window & door, wood

Carr Adams & Collier Co Dubuque Ia
Cole Mfg Co Memphis Tenn
Curtis Co Clinton Ia
Goshen Sash & Door Co Goshen Ind
Gregg & Son Nashua N H
Huttig Mfg Co Muscatine Ia
Huttig Sash & Door Co 1206 S Vandeventer St Louis 10 Mo
Long-Bell Lumber Co PO Box 1079 Longview Wash & R A Long Bldg Kansas City Mo
Marquart Millwork Co Oshkosh Wis
Morgan Co Oshkosh Wis
J R Quigley Co Gloucester City N J
Roach & Musser Co Muscatine Ia
Wm J Samcoe Iron Co 917 Military Rd Kenmore 17 N Y
George J Silbernagel 8 S Michigan Av Chicago 3 Ill

SHUTTERS—window & door, metal

Allen Steel Products Inc 12911 Hillview Av Detroit 27 Mich
American Sheet Metal Works 331 N Alexander St New Orleans La
Colgate Mfg Corp 152 S 15th St Lindenhurst Long Island N Y
Fawsco Mfg Div of Falls Stamping & Welding Co 1701 Front St Cuyahoga Falls O
Fries & Son Covington Ky (steel)
Leigh Building Products Div of Air Control Products Inc Coopersville Mich
United Metal Products Inc 865 S High St Akron 11 Ohio (aluminum, window only)

SIDING—aluminum clapboard

Childers Mfg Co 625 Yale St Houston Tex
The Kawneer Co Niles Mich
New Holland Metals Co Dept L-451 Mountville Pa
Permanente Products Co Kaiser Aluminum Div Kaiser Bldg Oakland 12 Calif
Reynolds Metals Co Bldg Prods Div 2002 S 9th St Louisville Ky
Southern States Iron Roofing Co PO Box 1159 Savannah Ga

SIDING—asbestos cement

Asbestone Corp 5300 Tchoupitoulas St New Orleans 15 La
Asbestos Asphalt Insulation Inc 2100 Fullerton Av Chicago 47 Ill
Asbestos Co of Texas P O Box 1082 Houston Texas
Philip Carey Mfg Co Dept AL-4 Cincinnati 15 Ohio
Celotex Corp 120 S La Salle Chgo 3 Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Johns-Manville Corp Box 290 22 E 40th New York 16 N Y
Keasbey & Mattison Co Ambler Pa
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
The Ruberoid Co 500 Fifth Av NY 18 NY
U S Gypsum Co 300 W Adams Chgo 6 Ill

SIDING—asphalt, brick, stone pattern insulating

Asbestos Asphalt Insulation Inc 2100 Fullerton Av Chicago 47 Ill
Barrett Div Allied Chemical & Dye Corp 40 Rector NY 6 NY
Bird & Son Inc Dept AL-4 East Walpole Mass
Philip Carey Mfg Co Dept AL-4 Cincinnati 15 Ohio
Celotex Corp 120 S La Salle Chgo 3 Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
The Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Globe Roofing Products Co Inc Whiting Ind
Johns-Manville Corp Box 290 22 E 40th St NY 16 NY
Jones & Brown Inc 439 6th Av Pittsburgh 19 Pa
B F Nelson Mfg Co Minneapolis 13 Minn
Plastergon Wallboard Co PO Box 40 Sta B Buffalo 7 N Y
The Ruberoid Co 500 Fifth Av NY 18 NY
Tamko Asphalt Products Inc 601 N High Joplin Mo
U S Gypsum Co 300 W Adams Chgo 6 Ill

SIDING—asphalt, laminated rigid

Celotex Corp 120 S La Salle Chgo 3 Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Globe Roofing Products Co Inc Whiting Ind
Logan-Long Co 6600 S Central Chicago 38 Ill
Ruberoid Co 500 5th Av New York 18 NY

SIDING—asphalt, mineral surfaced

American Asphalt Roof Corp 7600 Truman Rd Kansas City 3 Mo
Asbestos Asphalt Insulation Inc 2100 Fullerton Av Chicago 47 Ill
Barrett Div Allied Chemical & Dye Corp 40 Rector NY 6 NY
Bird & Son Inc Dept AL-4 East Walpole Mass
Celotex Corp 120 S La Salle Chgo 3 Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Ford Roofing Products Co 188 W Randolph Chicago 1 Ill
Globe Roofing Products Co Inc Whiting Ind
Johns-Manville Corp Box 290 22 E 40th New York 16 N Y
Jones & Brown Inc 439 6th Av Pittsburgh 19 Pa
Logan-Long Co 6600 S Central Chicago 38 Ill
B F Nelson Mfg Co Minneapolis Minn
The Ruberoid Co 500 Fifth Av NY 18 NY
Tamko Asphalt Products Inc Joplin Mo
The Texas Co 135 E 42nd St New York 17 N Y
United States Gypsum Co 300 W Adams St Chicago 6 Ill

SIDING—asphalt, roll brick pattern

American Asphalt Roof Corp 7600 Truman Rd Kansas City 3 Mo
Barrett Div Allied Chemical & Dye Corp 40 Rector NY 6 NY
Bird & Son Inc Dept AL-4 East Walpole Mass
Globe Roofing Products Co Inc Whiting Ind
Johns-Manville Corp Box 290 22 E 40th St NY 16 NY
Lehon Co 4425 S Oakley Av Chgo 9 Ill
Logan-Long Co 6600 S Central Chicago 38 Ill
B F Nelson Mfg Co Minneapolis Minn
The Ruberoid Co 500 Fifth Av NY 18 NY
Tamko Asphalt Products Inc Joplin Mo
The Texas Co 135 E 42nd New York 17 NY
U S Gypsum Co 300 W Adams Chgo 6 Ill

SIDING—steel

American Steel & Wire Co Superior Av Cleveland 13 Ohio
Badger Corrugating Co La Crosse Wis
Bethlehem Steel Co Bethlehem Pa
Carnegie-Illinois Steel Corp US Steel Corp Sub Carnegie Bldg Pittsburgh 30 Pa
Ceco Steel Products Corp 5601 W 26th Chicago 50 Ill
Cincinnati Sheet Metal & Roofing Co Cincinnati 2 Ohio
Columbia Steel Co Russ Bldg San Francisco 6 Cal
Continental Steel Corp Kokomo Ind
Fries & Son Covington Ky
Inland Steel Products Co 4207 W Burnham St Milwaukee 1 Wis
Klauer Mfg Co Dubuque Iowa
LaCrosse Steel Roofing & Corrugating Co LaCrosse Wis
Nichols Wire & Aluminum Co Davenport Ia
Reeves Steel & Mfg Co Dover Ohio
Republic Steel Corp Berger Mfg Div Canton 5 Ohio
St Paul Corrugating Co St Paul Minn
Tennessee Coal Iron & RR Co US Steel Corp Sub Birmingham 2 Ala
Tiffin Art Metal Co Tiffin 16 Ohio
Wheeling Corrugating Co Wheeling West Virginia

SIDING—wood

(See lumber section beginning page 676)

SIDING CORNERS

Allmetal Weatherstrip Co 2243 N Knox Av Chicago 39 Ill (trim)
Bird & Son Inc Dept AL-4 East Walpole Mass
Bugher Mfg Co Kokomo Ind
Ceco Steel Products Corp 5601 W 26th St Chicago 50 Ill
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Edwards Mfg Co 427 Culvert St Cincinnati 2 Ohio
Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Inland Steel Products Co 4207 W Burnham St Milwaukee 1 Wis
Jones & Brown Inc 439 6th Av Pittsburgh 19 Pa
F D Kees Mfg Co Beatrice Neb
LaCrosse Steel Roofing & Corrugating Co LaCrosse Wis
Merwin Mfg Co Erie Pa
Northwest Metal Products Inc 55 Spokane St Seattle Wash
St Paul Corrugating Co 3 W Water St St Paul 1 Minn
Southern Metal Products Corp 921 Rayner St Memphis Tenn
United States Gypsum Co 300 W Adams Chicago 6 Ill
Wheeling Corrugating Co Wheeling W Va

SIGNS

Economy Novelty & Printing Co 225 W 39th St New York N Y
Enamel Products Co Eddy Rd & Taft Av Cleveland 8 Ohio
Engineered Plywood Products Co PO Box 1326 Tacoma Wash (plywood)
Ingram-Richardson Mfg Co Beaver Falls Pa
Macklanburg-Duncan Co Oklahoma City 1 Okla
Newman Bros Inc Dept A-L 660 4th St Cincinnati 3 Ohio
Reflecto Letters Inc 411 E 101st St New York 29 N Y
Tiffin Art Metal Co Tiffin 16 Ohio
U-Bild Enterprises Van Nuys Cal

SILO & TANK HARDWARE

DeMuth Steel Products Co 20 N Wacker Dr Chicago 6 Ill

SILO LINER PAPER

Angier Corp Framingham Mass
Keystone Asphalt Products Co 43 E Ohio Chicago 11 Ill
Presstite Engineering Co 3900 Chouteau Av St Louis 10 Mo
The Richkraft Co 228 N LaSalle St Chicago 1 Ill
The Sisalkraft Co Dept AL-4 205 W Wacker Dr Chgo 6 Ill
Thilmany Pulp & Paper Co Kaukanna Wis

SILOS

W E Caldwell Co Louisville 8 Ky
Economy Silo & Mfg Co Frederick Md
Globe Silos Unadilla N Y
Harder Silo Co Inc Cobleskill N Y
Hubbard & Co 6301 Butler St Pittsburgh 1 Pa
Illinois Wire & Mfg Co PO Box A-1316 Joliet Ill
Independent Silo Co 752 Vandalia St Paul Minn
Johnson & Carlson 848 Eastman St Chicago 2 Ill
Kalamazoo Tank & Silo Co Kalamazoo Mich
M & M Wood Working Co Resnpreat Div 2301 N Columbia Portland 3 Ore
Nebraska Bridge Sup & Lbr Co 40th & Leavenworth St Omaha 5 Nebr
Twin City Tank Silo & Specialty Co 38th Av NE & Fifth St Minneapolis Minn
Unadilla Silo Co Inc Unadilla N Y
Willamette Valley Lbr Co Dallas Ore

SINK RIMS

B & T Metals Co 425 W Town St Columbus 16 Ohio
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill

SINKS—cabinet

American Central Mfg Corp Connersville Ind
Carr Adams & Collier Co Dubuque Ia
Coppes Inc Nappanee Ind
Crane Co 836 S Michigan Av Chicago 5 Ill
Curtis Cos Inc Clinton Ia
Elgin Stove & Oven Div of Acme Visible Records Inc 122 S Michigan Av Chgo 3 Ill
Elkay Mfg Co 1874 S 54th Av Chgo 50 Ill
Eljer Co Ford City Pa
Excel Metal Cabinet Co Inc 101 Park Av NY NY
General Electric Co Schenectady 5 N Y
Hotpoint Inc 5600 W Taylor Chgo 44 Ill
I-XL Furniture Co Inc Goshen Ind
Kohler Co Kohler Wis
Mullins Mfg Co Warren O
Murray Corp of America Scranton 2 Pa
Mutschler Bros Co Napanee Ind
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Republic Steel Corp Berger Mfg Div Canton 5 Ohio
Shirley Corp 330 E St Joe Indianapolis 2 Ind
Toledo Desk & Fixture Co Dept MG-42 Maumee Ohio
Tracy Mfg Co 3125 Preble Av Pittsburgh 12 Pa

SINKS—vitreous porcelain enameled

Abingdon Potteries Inc Abingdon Ill (vitreous china)
American Radiator & Standard Sanitary Corp Bessemer Bldg Pittsburgh 22 Pa
Briggs Mfg Co Detroit Mich
Crane Co 836 S Michigan Av Chgo Ill
Eljer Co Ford City Pa
Elgin Stove & Oven Div of Acme Visible Records Inc 122 S Michigan Chicago 3 Ill
The Enamel Products Co Eddy Rd & Taft Av Cleveland 8 Ohio
Ingram-Richardson Mfg Co Beaver Falls Pa
General Ceramics Co Metuchen N J
General Porcelain Enameling & Mfg Co 2700 N Karlov Av Chgo 39 Ill
Ingersoll Steel Div of Borg-Warner Corp 310 S Michigan Av Chicago Ill
Murray Corp of America Scranton 2 Pa
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Richmond Radiator Co 19 E 47th St New York 17 N Y
Roberts & Mander Corp Hatboro Pa
Tracy Mfg Co 3125 Preble Av Pittsburgh 12 Pa
Universal-Rundle Corp New Castle Pa

SINKS—stainless steel

Crane Co 836 S Michigan Av Chicago 5 Ill
Elgin Stove & Oven Div of Acme Visible Records Inc 122 S Michigan Av Chgo 3 Ill
Elkay Mfg Co 1874 S 54th Av Chgo 50 Ill
Excel Metal Cabinet Co Jamestown NY
Geneva Modern Kitchens Geneva Ill
Gichner Inc 2900 Kendall St N E Washington 2 D C
Harrison Steel Cabinet Co 4718 W 5th Av Chicago 44 Ill
Just Mfg Co 4610 W 21st St Chicago 50 Ill (stainless steel)

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

UNIVERSITY OF MICHIGAN LIBRARIES

Legion Stainless Sink Corp 40th Av & 21st Long Island City 1 N Y
Paragon Utilities Corp 50 Van Dam St Brooklyn 22 N Y
Republic Steel Corp Cleveland 1 Ohio
Tracy Mfg Co 3125 Preble Av Pittsburgh 12 Pa

SKYLIGHTS

American Sheet Metal Works 331 N Alexander St New Orleans La
Badger Corrugating Co La Crosse Wis
La Crosse Steel Roofing & Corrugating Co La Crosse Wis
Edwards Mfg Co 427 Culvert St Cincinnati 2 Ohio
Gichner Inc 2900 Kendall St N E Washington 2 D C
Pennsylvania Wire Glass Co Philadelphia 3 Pa
Resolite Corp Zelienople Penna
St Paul Corrugating Co St Paul 1 Minn
Stewart Iron Works Co Inc 1951 Stewart Block Cincinnati 1 Ohio
Tiffin Art Metal Co Tiffin 16 Ohio
Willis Steel Corp Galesburg Ill

SLIDING LOCK CLIPS

E G Building Fasteners Corp 101 Park Av New York 17 N Y

SOLDERS—liquid, paste

Ensign Products Co Cleveland 5 Ohio
Lake Chemical Co 162-P N Clinton St Chgo 6 Ill
Lenk Mfg Co 30 Cummington St Boston 15 Mass
Lux-Visel Inc Elkhart Ind
National Lead Co 111 Broadway New York 6 N Y

SOLDER—silver

E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Belmont Smelting & Refining Works 330 Belmont Av Brooklyn 7 N Y
P Wall Mfg Co Grove City Pa

SOLDERING FLUX

Belmont Smelting & Refining Wks 330 Belmont Av Brooklyn 7 N Y
Boyer Chemical Laboratory Co 2232 S Wabash Chicago 16 Ill
Chas Brass & Copper Co 236 Grand St Waterbury 20 Conn
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Lake Chemical Co 162-P N Clinton St Chgo 6 Ill
National Lead Co 111 Broadway NY 6 NY
P Wall Mfg Co Grove City Pa

SOOT DESTROYERS

Acorn Refining Co 8001 Franklin Blvd Cleveland O
Boyer Chemical Laboratory Co 2232 S Wabash Chicago 16 Ill
G N Coughlan Co 29 Spring West Orange N J
Etling Window Dept AL Barberton O
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill
P Wall Mfg Supply Co Grove City Pa

SPONGES

American Sponge & Chamois Co Inc 49 Walker St New York N Y
Atlantic Sponge & Chamois Corp 49 Walker New York 13 N Y
Albert Bloch & Sons Inc 36 Walker St NY 13 NY
E. I. du Pont de Nemours & Co Inc Wilmington 98 Del (cellulose)
H L Ettman Sponge Co 1908 Olive St St Louis 3 Mo
Florida Sponge & Chamois Co 42 Cliff New York 7 N Y
Gulf & West Indies Co 141 Water St NY 5 NY
Nassau Sponge Co 124 W Kinzie Chgo 10 Ill
Robinson Sponge Co 1805 Atlantic Av Brooklyn 33 NY
Schroeder & Tremayne Inc 1711 Delmar Blvd St Louis 3 Mo
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill (rubber)

SPRAY—stock

Chemical Supply Co 225 Plymouth Bldg Cleveland 15 Ohio
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Gordon Chemical Co Inc 1700 Hickory Av Kansas City 7 Mo
Pennsylvania Salt Mfg Co Philadelphia Pa
Puritan Chemical Co Atlanta 3 Ga
Sherwin-Williams Co Cleveland O
D B Smith & Co Inc 435 Main St Utica 2 New York

SPRAYERS—insecticide garden, lawn

Armstrong Products Corp Huntington 12 West Va
Brower Mfg Co Box 251 Quincy Ill
Camp Chemical Co Inc 2nd Av & 13th St Brooklyn N Y
Electric Sprayit Co 1415 Illinois Av Sheboygan Wis
Essick Mfg Co 1950 S Santa Fe Av Los Angeles 21 Calif (insecticide only)
A B Farquhar Co 142 N Duke St York Pa
John H Graham & Co Inc 105 Duane St New York 8 N Y
H D Hudson Mfg Co 589 E Illinois Chicago 11 Ill
Lowell Mfg Co Dept 63 589 E Illinois St Chicago 11 Ill
F E Myers & Bro Co Ashland Ohio
Melnor Metal Products Co Inc 112 Lafayette St New York 13 N Y
D B Smith & Co Inc 435 Main St Utica 2 N Y
N B Spurgeon Co 20 N Wacker Dr Chicago 6 Ill

SPRINGS—door

Accurate Spring Mfg Co 3811 W Lake Chgo Ill
Chicago Spring Hinge Co 1500 Carroll Av Chicago 7 Ill
P & F Corbin Div The American Hdwe Corp New Britain Conn
Fiwale Equipment Mfg Co 105 Reade St NY 13 NY
M D Hubbard Spring Co Pontiac Mich
Ideal Brass Works Inc 250 E 5th St St Paul 1 Minn
Milwaukee Stamping Co 800 S 72nd St Milwaukee 14 Wis
Sargent & Co P O Box 1940 New Haven 9 Conn
The Stanley Wks New Britain Conn
Tennessee Coal Iron & RR Co U S Steel Corp Sub Box 2634 Birmingham 2 Ala

SQUARES—carpenters, steel, "T"

Brown & Sharpe Mfg Co Providence RI
Eugene Dietzgen Co 2425 N Sheffield Av Chgo Ill
Keuffel & Esser Co Hoboken N J
Millers Falls Co Greenfield Mass
Peck Stow & Wilcox Co Southington Conn
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Sharp's Mfg Co PO Box 122 Salem Ore (automatic framing)
Southington Hardware Mfg Co Southington Conn
Stanley Tools Div of Stanley Works 111 Elm St New Britain Conn
L S Starrett Co Athol Mass
Union Tool Co Orange Mass
Woodmark Industries Inc 4601-D Highway 7 St Louis Park Minneapolis 16 Minn

SQUARES—glass cutters'

Glaziers' Tool Mfg Co 611 W Adams Chicago 6 Ill
Lufkin Rule Co Saginaw Mich
Sommer & Maca Glass Machinery Co 3604 S Oakley Av Chicago 9 Ill

SQUEEGEES

De Hymel Mfg Co Ltd Pasadena Cal
W J Dennis & Co 4444 W Irving Park Chicago Ill
A F Dormeyer Mfg Co 4316 N Kilpatrick Av Chgo Ill
Florida Sponge & Chamois Co Inc 42 Cliff St New York 38 N Y
W E Kautenberg Co Freeport Ill
Superior Plastics Div Commonwealth Plastics Inc 426 N Oakley Blvd Chicago 12 Ill
A L Swett Iron Works Medina New York

STACKERS—automatic lumber

American Mfg Co 2119 Pacific Av Tacoma 2 Wash
Moore Dry Kiln Co 1220 W State St Jacksonville Fla

STAIN—concrete

Samuel Cabot Inc 420 Oliver Bldg Boston 9 Mass
Empire Varnish Co 2636 E 76th St Cleveland 4 Ohio
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Rohloff & Co 918 N Western Av Hollywood 28 Cal
J Lee Smith & Co Inc 19 Jacob NY NY
The Sullivan Co P O Box 2606 Memphis 2 Tenn
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill
C K Williams & Co Easton Pa

STAIN—shingle, wood

Abesto Mfg Corp Michigan City Ind
American Stained Shingle Co 355 Spruce St Dept B Columbus 8 O
Boston Varnish Co Boston 49 Mass
Breinig Brothers Inc 1st & Harrison Hoboken N J
Samuel Cabot Inc 420 Oliver Bldg Boston 9 Mass
Calbar Paint & Varnish Co 2612 N Martha St Philadelphia 25 Pa
Carbolineum Wood Preserving Co 528 W Highland Av Milwaukee 3 Wis
Ceraseal Chemical Corp 2216 South St Lafayette Ind
Chi-Namel Paint & Varnish Co 1101 3rd St So Minneapolis 15 Minn
Colonial Cedar Co 600 W Nickerson St Seattle 99 Wash
Creo-Dipt Co Inc Dept AL-42 North Tonawanda NY
Cuprinol Div Darworth Inc 53 Maple St Simsbury Conn
Devoe & Raynolds Co Inc 787 1st Av New York 17 N Y
Elliott Paint & Varnish Co 4525 W Fifth Av Chicago 24 Ill
Empire Varnish Co 2636 E 76th St Cleveland 4 Ohio
Glidden Co Cleveland Ohio
R F Johnston Paint Co 3925 Huston Av Cincinnati 12 Ohio
Lowe Bros Co Dayton 2 Ohio
Minnesota Paints Inc 1101 3rd St So Minneapolis 15 Minn
Murphy Paint Div Interchemical Corp 231 Grant Av East Newark N J
Olympic Stained Products Co 1118 Leary Way Seattle Wash
Patterson—Sargent Co 1325 E 38th St Cleveland 14 Ohio
Perma Products Co 5455 Broadway Av Cleveland 4 Ohio
Portland Shingle Co 9036 N Denver Av Portland 3 Oregon
Pratt & Lambert Inc 75 Tonawanda Buffalo 7 NY
Protection Products Mfg Co Kalamazoo 99 Mich
Protexol Corp 50 Market St Kenilworth 4 N J
Sargent-Gerke Co Indianapolis 6 Ind
Sherwin-Williams Co Cleveland O
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Standard Industrial Products Inc Box 325 Evansville 4 Ind
Valentine & Co 11 E 36th St NY 16 NY
Vita-Var Corp 1180 Raymond Blvd Newark 2 N J
Wadsworth Howland & Co 141 Federal Boston Mass
Geo D Wetherill & Co 113 Arch St Philadelphia 6 Pa
Wood Preserver Co St Louis Mo
Wood Treating Chemicals Co St Louis Mo

STAIRS—disappearing

Bessler Disappearing Stairway Co Akron O
Craig Wood Products Co Brennan Rd Columbus Ga
EZ-Way Sales Inc Div of Minnesota Wood Specialties Box 300 Dept L St Paul Park Minn
Farley & Loetscher Mfg Co Dubuque Ia
Foldaway Stairway Co Inc 813 Seaboard St Portsmouth Va
Huntington Industries 2368 Prospect St Memphis Tenn
Marco Stairways 1695 N Cleveland Av St Paul 8 Minn
Precision Parts Corp Nashville 7 Tenn
Wel-Bilt Products Co PO Box 95 Memphis Tenn

STAIRWAYS—steel

Artcraft Ornamental Iron Co 724 E Hudson Columbus O
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Decatur Iron & Steel Co Decatur Ala
J W Fiske Iron Works 78 Park Place New York 7 N Y
Grand Rapids Wire Products Co 501 Front Av N W Grand Rapids 4 Mich

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Haven-Busch Co 501 Front St N W Grand Rapids 4 Mich
Marco Stairways 1695 N Cleveland Av St Paul 8 Minn
Geo L Mesker Steel Corp Evansville 8 Ind
Metal Crafters 1756 E Av NE Cedar Rapids Iowa
F P Smith Wire & Iron Works 2340 Clybourn Av Chicago 40 Ill

STAIRWORK—wood

Carr Adams & Collier Co Dubuque Ia
Cole Mfg Co Box 2657 Memphis 2 Tenn
Corbett Cabinet Co St Marys Pa
Curtis Companies Inc Clinton Ia
Farley & Loetscher Mfg Co Dubuque Iowa
Huttig Mfg Co Muscatine Ia
Huttig Sash & Door Co 1206 Vandeventer Av St Louis 10 Mo
Marquart Millwork Co Oshkosh Wis
Morgan Co Oshkosh Wis
Morgan Sash & Door Co 2287 S Blue Island Av Chicago 8 Ill
Radford & Sanders Inc Baltimore Md
The Radford Co Oshkosh Wis
Rock Island Millwork Co Rock Island Ill

STAPLERS

Arrow Fastener Co Inc 30-38 Maujer St Brooklyn 6 N Y
Acme Staple Co 1643 Haddon Av Camden N J
Bostitch Inc East Greenwich R I
Burgess Fastening Co 1220 W 9th St Cleveland 13 Ohio
Consolidated Wire Products Co Inc 145 Spring St New York 12 N Y
Crofoot Mfg Co 218 Evergreen Av Mt Prospect Ill
Fastener Corp 862 Fletcher St Chgo 14 Ill
The E H Hotchkiss Co Norwalk Conn
Markwell Mfg Co Inc 200 Hudson NY 13 NY

STAPLES—wire

Acme Staple Co 1643 Haddon Av Camden N J
American Steel & Wire Co Rockefeller Bldg 614 Superior Av N W Cleveland 13 Ohio
Arrow Fastener Co Inc 30-38 Maujer St Brooklyn 6 N Y
Atlas Tack Corp Fairhaven Mass
Bostitch Inc East Greenwich R I
Burgess Fastening Co 1220 W 9th St Cleveland 13 Ohio
Consolidated Wire Products Co Inc 145 Spring St New York 12 N Y
Continental Steel Corp Kokomo Ind
Copperweld Steel Co Glassport Pa
Crofoot Mfg Co 215 Evergreen Av Mt Prospect Ill
Fastener Corp 862 Fletcher St Chgo 14 Ill
Frantz Mfg Co Sterling Ill
A J Gerrard & Co 1950 Hawthorne Av Melrose Park Ill
The E H Hotchkiss Co Norwalk Conn
Chas O Larson Co Sterling Ill
Markwell Mfg Co Inc 200 Hudson NY 13 NY
Mid-States Steel & Wire Co Crawfordsville Ind
National Mfg Co Sterling Ill
Natl Screw & Mfg Co Cleveland O
Nichols Wire & Aluminum Co Davenport Ia (aluminum)
Pittsburgh Steel Co Pittsburgh Pa
Republic Steel Corp Cleveland 1 Ohio
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Shelton Tack Co 103 Canal Shelton Conn
Tennessee Coal Iron & R R Co U S Steel Corp Sub Birmingham Ala
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp 500 Fifth Av New York 18 N Y

STEEL FRAMING

American Bridge Co U S Steel Corp Sub Frick Bldg Pittsburgh 19 Pa
Bethlehem Steel Co Bethlehem Pa
Fries & Son Covington Ky
Great Lakes Steel Corp Stran Steel Div Detroit 26 Mich
Jones & Laughlin Steel Corp Pittsburgh Pa
Laclede Steel Co St Louis 1 Mo
Geo L Mesker Steel Corp Evansville Ind
Tennessee Coal Iron & RR Co U S Steel Corp Sub Birmingham Ala
Wheeling Corrugating Co Wheeling W Va

STEEL WOOL

American Steel Wool Mfg Co Inc 42-24 Orchard St Long Island City 1 N Y
Brillo Mfg Co 60 John St Brooklyn 1 N Y
Eagle Steel Wool Co 6201 W 65 Chgo Ill
International Steel Wool Corp Springfield Ohio
James H Rhodes & Co 157 W Hubbard St Chgo Ill
L M Thornton Mfg Co Inc 2825 E 18th St Kansas City 1 Mo
Williams Co London O

STOKERS—coal automatic

American Engineering Co Kensington Station Philadelphia 25 Pa (underfeed spreader)
Brownell Co 321 N Findley St Dayton 1 O
Chrysler Corp Airtemp Div Dayton 1 Ohio
Clizbe Bros Mfg Co Portsmouth Ind
Combustion Superheater - Engineering Inc 200 Madison Av New York 16 N Y
Econ-O-Col Stoker Div of Cotta Transmission Co Rockford Ill
Erie City Iron Wks Erie Pa
Excelsior Stove & Mfg Co Quincy Ill
Fairbanks Morse & Co 600 S Michigan Av Chgo Ill
Iron Fireman Co 3170 W 106 Cleveland 11 Ohio
Kol-Master Corp Oregon Ill
Red Jacket Coal Corp 115 E Rich St Columbus 15 Ohio
Steel Products Engineering Co Combustioneer Div Springfield Ohio
U S Machine Corp Lebanon Ind
Westinghouse Electric Corp Dept G-10093-A 306 Fourth Av Pittsburgh 30 Pa

STORE FRONTS

Brasco Mfg Co Harvey Ill
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
General Porcelain Enameling & Mfg Co 2700 N Karlov Av Chgo 39 Ill
Gichner Inc 2900 Kendall St N E Washington 2 D C
The Kawneer Co Niles Mich
Pennsylvania Wire Glass Co Philadelphia 3 Pa
Pittsburgh Plate Glass Co 2126 Grant Bldg Pittsburgh 19 Pa

STOVES—brooder

Brower Mfg Co Box 251 Quincy Ill
Buckeye Incubator Co Springfield O
Excelsior Stove & Mfg Co Quincy Ill
Harder Silo Co Cobleskill N Y
Perfection Stove Co 7609 Platt Av Cleveland 4 Ohio

STOVES—camp, gasoline, pressure

American Gas Machine Co 505 Front St Albert Lea Minn
Hamlin Metal Prod Co Inc Akron O
Prentiss Waber Prod Co Wisconsin Rapids Wis
Quad Stove Mfg Co Columbus O
Sandvik Saw & Tool Div of Sandvik Steel Inc 47 Warren St New York 7 N Y
Turner Brass Wks Sycamore Ill
Union Steel Prod Co Albion Mich
Washington Stove Works Box 919 Everett Wash

STOVES—coal

Athens Stove Wks Athens Tenn
Excelsior Stove & Mfg Co Quincy Ill
Gray & Dudley Co 2300 Clifton Rd Nashville 3 Tenn
King Stove & Range Co Sheffield Ala
Red Jacket Coal Corp 115 E Rich St Columbus 15 Ohio
Washington Stove Wks PO Box 919 Everett Wash

STOVES—oil

Excelsior Stove & Mfg Co Quincy Ill
Florence Stove Co Gardner Mass
A J Lindemann & Hoverson Co 601 W Cleveland Av Milwaukee 7 Wis
Perfection Stove Co 7609 Platt Av Cleveland 4 Ohio
Prentiss Wabers Products Co Wisconsin Rapids Wis
Washington Stove Wks PO Box 919 Everett Wash

STRAIGHT EDGES

Brown & Sharpe Mfg Co Providence R I
Eugene Dietzgen Co 2425 N Sheffield Av Chicago 14 Ill
Keuffel & Esser Co Hoboken N J
Red Devil Tools Irvington 11 N J
Ridgely Trimmer Co Springfield O
Walter E Selck & Co 225 W Hubbard Chicago 10 Ill
Warren-Knight Co 136 N 12th St Philadelphia 7 Pa
R D Werner Co Inc 295 Fifth Av New York 16 N Y

STRAINER—down pipe

Alabama Metal Lath Co PO Box 992 Birmingham Ala
Badger Corrugating Co La Crosse Wis
Ceco Steel Products Corp 5601 W 26th St Chicago 50 Ill
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
The Donley Bros Co 18928 Miles Av Cleveland 5 Ohio
Gichner Inc 2900 Kendall St N E Washington 2 D C
LaCrosse Steel Roofing & Corrugating Co LaCrosse Wis
Northwest Metal Products Inc 55 Spokane Av Seattle 4 Wash
Republic Steel Corp Berger Mfg Div Canton 5 Ohio
Sommer Metalcraft Corp Crawfordsville Ind
U S Cistern Filter Mfg Co Bloomington Ill

STRAP APPLYING EQUIPMENT

Brainard Steel Co Building Products Div Dept 349 Warren Ohio
A J Gerrard & Co 1950 Hawthorne Av Melrose Pk Ill
Gerrard Steel Strapping Co (US Steel Corp Sub) 2915 W 47th St Chicago 32 Ill
Signode Steel Strapping Co 2600 N Western Av Dept 113 AML Chicago Ill

STRAPPING—steel

Acme Steel Co 2808 Archer Av Chicago 8 Ill
Brainard Steel Co Bldg Products Div Dept 350 Warren Ohio
A J Gerrard & Co 1950 Hawthorne Av Melrose Park Ill
Gerrard Steel Strapping Co (US Steel Corp Sub) 2915 W 47th St Chicago 32 Ill
The Paine Co 2951 Carroll Av Chgo 12 Ill
Signode Steel Strapping Co 2600 N Western Av Dept 113 AML Chicago Ill
The Stanley Wks New Britain Conn

STUCCO

Beautex Plaster Mfg Co Lebanon Pa
E D Coddington Mfg Co 5024 N 37th St Milwaukee 9 Wis
Colorcrete Industries Inc Holland Mich
Louisville Cement Co Inc Speed Bldg Louisville 2 Ky
Penn Crete Products Co 20th & Lippincott Sts Philadelphia 32 Pa
The Sullivan Co P O Box 2606 Memphis 1 Tenn
U S Gypsum Co 300 W Adams Chgo 6 Ill
Woodville Lime Prod Co Toledo O

STUMP PULLERS—tractor & horse drawn

Dorsey Trailers Elba Ala
Hyster Co 2939 NE Clackamas Portland 8 Ore & Peoria 1 Ill

SUNDIALS—cast bronze

Colorcrete Industries Inc Holland Mich
Colonial Brass Co Middleboro Mass
Clinton Lock Co Clinton Ia
J W Fiske Iron Works 78 Park Place New York 7 N Y
Newman Bros Inc Dept A-L 660 4th St Cincinnati 3 Ohio
Standard Bronze Co Bayonne 8 N J
Turner Brass Wks Sycamore Ill

TABLE TOPS—drafting

Keuffel & Esser Co Hoboken N J
Kinzua Pine Mills Co Kinzua Ore
Frederick Post Co 155 E Ohio Chgo 11
H E Smith Co Adrian Mich
Southern Wire & Iron Works 441 Memorial Dr S E Atlanta Ga

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

UNIVERSITY OF MICHIGAN LIBRARIES

TABLE TOPS—porcelain enameled

Enamel Prod Co Eddy Rd & Taft Av Cleveland 8 Ohio
General Porcelain Enameling & Mfg Co 2700 N Karlov Av Chgo 39 Ill
Ingram-Richardson Mfg Co Beaver Falls Pa
Rigidized Metals Corp 658 Ohio St Buffalo 3 N Y
Tennessee Enamel Mfg Co Nashville Tenn
Vitreous Steel Prod Co Cleveland O

TABLE TOPS—stainless steel

Enamel Products Co Eddy Rd & Taft Av Cleveland 8 Ohio
Gichner Inc 2900 Kendall St N E Washington 2 D C
Just Mfg Co 4610 W 21st St Chicago 50 Ill
Ruslander & Sons Inc 18 Letchfield St Buffalo 13 N Y

TABLES—display

American Plywood Corp Div of Curtis Cos New London Wis & Clinton Ia
Brewer-Titchener Corp 111 Port Watson St Cortland N Y
Equipto Div of Aurora Equipment Co Aurora Ill
Formica Insulation Co 4501 Spring Grove Av Cincinnati 32 Ohio
Grand Rapids Store Equipment Co Grand Rapids 2 Mich
Hartwig Inc 1105 N 4th St Milwaukee 3 Wis
W C Heller & Co Cat #40A 1050 Bryant St Montpelier O
Chas O Larson Co Sterling Ill
Ruslander & Sons Inc 18 Letchfield St Buffalo 13 N Y
Harry M Wolfe 666 Lake Shore Drive Chicago 11 Ill

TABLES—kitchen

Austell Cabinet Co Austell Ga
Enamel Products Co Eddy Rd & Taft Av Cleveland 8 Ohio
General Wood Works Council Bluffs Iowa
Kinzua Pine Mills Co Kinzua Ore
Salmanson & Co Inc 1107 Broadway New York 10 N Y
J D Warren Mfg Co Montpelier Ohio

TACKERS—automatic

Acme Staple Co 1643 Haddon Av Camden N J
Acme Steel Co Dept AL-40 2840 Archer Av Chgo 8 Ill
Arrow Fastener Co Inc 30-38 Maujer St Brooklyn 6 N Y
Bostitch Inc East Greenwich R I
Burgess Fastening Co 1220 W 9th St Cleveland 13 Ohio
Crofoot Mfg Co 218 Evergreen Av Mt Prospect Ill
Fastener Corp 862 Fletcher Chgo 14 Ill
A L Hansen Mfg Co 5037 N Ravenswood Chgo Ill
The E H Hotchkiss Co Norwalk Conn
Markwell Mfg Co Inc 200 Hudson NY 13 NY

TACKERS—hammer

Bostitch Inc East Greenwich R I
Burgess Fastening Co 1220 W 9th St Cleveland 13 Ohio
Fastener Corp 862 Fletcher Chgo 14 Ill
The E H Hotchkiss Co Norwalk Conn
Markwell Mfg Co Inc 200 Hudson St New York 13 N Y
Stanley Tools Div of Stanley Works 111 Elm St New Britain Conn

TACKS

American Steel & Wire Co Rockefeller Building 614 Superior Av N W Cleveland 13 Ohio
Atlas Tack Corp Fairhaven Mass
Burgess Fastening Co 1220 W 9th St Cleveland 13 Ohio
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Columbia Steel Co Russ Bldg San Francisco Calif
Hillwood Mfg Co Cleveland O
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
Sheffield Steel Corp Sheffield Sta Kansas City Mo
Shelton Tack Co 103 Canal Shelton Conn
Snell-Jones Tack Corp Brockton Mass
Waterbury Tack Co Inc 200 Fifth Av New York N Y

TACKS—thumb

Atlas Tack Corp Fairhaven Mass
Hampden Mfg Co Plainfield N J
Hillwood Mfg Co Cleveland O
Holland Mfg Co Baltimore Md
Robt E Miller Inc 35 Pearl NY NY
Moore Push-Pin Co Phil Pa
Waterbury Tack Co Inc 200 5 Av NY NY

TANKS—septic-clay

Cannelton Sewer Pipe Co Cannelton Ind
Denver Sewer Pipe & Clay Co Denver 1 Colo
W S Dickey Clay Mfg Co 922 Walnut St Kansas City 6 Mo
Evans Pipe Co Uhrichsville O
Lehigh Sewer Pipe & Tile Co Fort Dodge Ia
Owensboro Sewer Pipe Co Inc Owensboro Ky
Robinson Clay Prod Co Akron O
Sealcon Products Inc 927 Second Av S Minneapolis 2 Minn
Streator Drain Tile Co Streator Ill
What Cheer Clay Products Co What Cheer Ia

TANKS—septic, steel

Armco Tank Corp Middletown Ohio
Beall Pipe & Tank Corp Portland Ore
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Ingalls Iron Wks Co Birmingham Ala
Price Fireplace Heater & Tank Corp 156 West Austin St Buffalo 7 N Y
Richmond Engineering Co Richmond Va

TANKS—septic, wood

Arrow Tank Co Inc 16 Barnett St Buffalo 15 N Y
Butler Mfg Co 13th & Eastern Av Kansas City 3 Mo
Fleishel Lbr Co 4243 Duncan Av St Louis 10 Mo
Johnson & Carlson 848 W Eastman Chgo Ill
Uniflow Mfg Co Erie Pa
U S-Challenge Co Batavia Ill
Weyerhaeuser Sales Co St Paul Minn

TANKS—steel stock & storage

Aermotor Co 2500 W Roosevelt Rd Chicago 8 Ill
American Steel Wks 1211 W 27th St Kansas City 8 Mo
Armco Drainage & Metal Products Inc Middletown Ohio
Beall Pipe & Tank Corp Portland Ore
Breyer Bros Whiting & Co Waupun Wis
Butler Mfg Co 13th & Eastern Av Kansas City 3 Mo
Dempster Mill Mfg Co Beatrice Neb
Edwards Mfg Co 427 Culvert St Cincinnati 2 Ohio
The Heil Co 3000 W Montana St Milwaukee 1 Wis
H D Hudson Mfg Co 589 E Illinois St Chicago 11 Ill
St Paul Fdry & Mfg Co St Paul 3 Minn
Seattle Boiler Wks 5237 E Marginal Way Seattle Wash
Siebring Mfg Co George Ia
Stover Steel Tank & Mfg Co Freeport Ill

TANKS—wood stock & storage

Aermotor Co 2500 W Roosevelt Rd Chicago 8 Ill
Arrow Tank Co Inc 16 Barnett St Buffalo 15 N Y
Atlantic Tank Corp Bergen N J
Atlas Tank Mfg Co San Francisco Cal
Baltimore Cooperage Tank & Tower Co Baltimore Md
Economy Silo & Mfg Co Frederick Md
Fleishel Lbr Co 4243 Duncan Av St Louis 10 Mo
Johnson & Carlson 848 W Eastman Chgo 22 Ill
New England Tank & Tower Co Everett Mass
Nukem Products Corp 111 Colgate Ave Buffalo N Y
Pacific Wood Tank Corp 461 Market St San Francisco 5 Calif
E F Schlichter Co Norristown Pa
Union Lumber Co San Francisco Cal
U S-Challenge Co 38 S Dearborn St Chgo 3 Ill
Whitlock Mfg Co P O Box 175 Hartford 10 Conn

TAPE—friction

The B F Goodrich Co Akron Ohio
Goodyear Tire & Rubber Akron O
Johns-Manville Corp Box 290 22 E 40th New York 16 N Y
Plymouth Rubber Co Inc Canton Mass
Superior Insulating Tape Co 3100 Lambdin Av St Louis 15 Mo
Union Rubber & Asbestos Co Trenton N J
United States Rubber Co 1230 Avenue of the Americas New York 20 N Y

TAPE—gummed

Atlantic Gummed Paper Corp 1 Main Brooklyn 1 N Y
Behr-Manning Corp Troy N Y
Cupples Co 401 S 7th St St Louis 2 Mo
Nashua Gummed & Coated Paper Co Nashua N H
South Eastern Cordage NBC Bldg Cleveland 14 Ohio
Tamms Industries Inc 288 N LaSalle Chicago 1 Ill
Wortendyke Mfg Co Richmond Va

TAPES—measuring

Carlson & Sullivan Inc 1714 S California Ave Monrovia Calif
Chicago Steel Tape Co 7956 S Chgo Av Chgo 17 Ill
Economy Novelty & Prtg Co 225 W 39th St New York 18 N Y
Evans & Co 410 Trumball St Elizabeth N J
Keuffel & Esser Co Hoboken N J
Lufkin Rule Co Saginaw Mich
Master Rule Mfg Co 201 Main St White Plains N Y
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
L S Starrett Co Athol Mass
Warren-Knight Co 136 N 12th St Philadelphia 7 Pa

TARPAULINS

American Tent & Awning Co 1132 Mission St San Francisco 3 Cal
The Astrup Co 2937 W 25th St Cleveland 13 O
Bemis Bros Bag Co 111 N 4th St St Louis 2 Mo
Canvas Products Co 1240 So 7th St St Louis 4 Mo
Canvas Specialty Co P O Box 937 Hartford Conn
Clifton Mfg Co PO Drawer 2029 Waco Tex
Couch Bros Mfg Co East Point Ga
C R Daniels Inc 44 West NY NY
Fulton Bag & Cotton Mills Atlanta 1 Ga
New York Drop Cloth Mfg Co Inc 10-57 Jackson Av L I City N Y
Standard Awning Co 83 Avon St Hartford 5 Conn
Wm J Stanley Co Inc 401 Broadway N Y 13 N Y
Tucker Duck & Rubber Co Ft Smith Ark
U S Tent & Awning Co 2315 W Huron Chgo Ill
H Wenzel Tent & Duck Co 1035 Paul St St Louis 4 Mo
Werner Canvas Prod Co 609 Bergen Brooklyn 17 N Y

TERMITE CONTROL

Abesto Mfg Corp Dept D3 Michigan City Ind
American Lbr & Treating Co 332 S Michigan Av Chicago 4 Ill
American Sheet Metal Works 331 N Alexander St New Orleans La
E L Bruce Co Box 397 Memphis Tenn
Carbolineum Wood Preserving Co Dept 12 528 W Highland Ave Milwaukee 3 Wis
C A Wood Preserver Co 6625 Delmar Blvd St Louis Mo
Coopers Creek Chemical Corp West Conshohocken Pa
Cre-o-Tox Chemical Co Memphis Tenn
Essick Mfg Co 2150 S Santa Fe Los Angeles 21 Calif
Forman Ford & Co 111 S 2nd St Minneapolis 1 Minn
Gordon Chemical Co 1700 Hickory St Kansas City 7 Mo
Hill Termite Control Systems 1282 Madison Av Memphis 4 Tenn
Protection Products Mfg Co Kalamazoo 99 Mich
Protexol Corp 50 Market St Kenilworth 4 N J
Republic Creosoting Co Merchants Bank Bldg Indianapolis 4 Ind
The Sullivan Co P O Box 2606 Memphis 2 Tenn
Vaccinol Products Corp 2487 Penn Av Memphis 9 Tenn

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TERNE PLATES

Badger Corrugating Co LaCrosse Wis
Bethlehem Steel Co Bethlehem Pa
Ceco Steel Products Corp 5601 W 26th St Chicago 50 Ill
Wheeling Corrugating Co Wheeling W Va
Wheeling Steel Corp Wheeling W Va
Youngstown Sheet & Tube Youngstown O

THINNER—paint

Acorn Refining Co 8001 Franklin Blvd Cleveland O
American Marietta Co 43 E Ohio Chgo 11 Ill
American Varnish Co 1138 N No Branch St Chgo 22 Ill
Breinig Bros Inc Hoboken N J
Chi-Namel Paint & Varnish Co Minneapolis Minn
Devoe & Raynolds Co Inc 787 First Av N Y 17 N Y
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Elliott Paint & Varnish Co 4525 W Fifth Av Chicago 24 Ill
Elroy Naval Stores Co Inc Vidalia Ga
Forman Ford & Co 111 S 2nd St Minneapolis 1 Minn
Glidden Co Cleveland O
Gordon Chemical Co 1700 Hickory St Kansas City 7 Mo
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
Plastic-Kote Inc 425 Lakeside Av NW Cleveland 13 Ohio
Pratt & Lambert Inc 75 Tonawanda St Buffalo 7 N Y
Sapolin Paints Inc 229 E 42nd St New York 17 N Y
Standard Industrial Products Inc Box 325 Evansville 4 Ind
20th Century Paint & Varnish Corp 456 Driggs Av Brooklyn 11 N Y
Valentine & Co Inc 11 E 36th St NY 16 NY
Woodfinishing Products Co 34 Industrial St Bronx 61 New York N Y

THRESHOLDS—metal

Allmetal Weatherstrip Co 229 W Ohio Chgo Ill
American Brass Co Waterbury Conn
American Mason Safety Tread Co Box 310 Lowell Mass
Ames Metal Moulding Co Inc 225 E 144th St New York 51 N Y
Ceco Steel Products Corp 5601 W 26th St Chicago 50 Ill
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Decatur Iron & Steel Co Decatur Ala
W J Dennis & Co 4444 W Irving Park Chgo Ill
Detroit Hdwe Mfg Co 1320 Mt Elliott Ave Detroit 7 Mich
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Karjam's Inc 495 Hempstead Turnpike W Hempstead L I N Y
Macklanburg-Duncan Co Oklahoma City 1 Okla
Master Metal Strip Service Inc 1720 N Kilbourn Av Chicago 39 Ill
Newman Bros Inc Dept A-L 660 4th St Cincinnati 3 Ohio
Nichols Wire & Aluminum Co Davenport Ia
Protex Weatherstrip Mfg Co 4508 S Western Chgo Ill
Russell & Erwin Div The American Cabinet Hdwe Corp New Britain Conn
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Weatherproof Products Corp PO Box 8498 Waldo Station Kansas City 5 Mo
Wooster Products Inc Wooster Ohio
Youngstown Manufacturing Inc Dept 1 66-76 S Prospect Youngstown 6 Ohio

THRESHOLDS—wood

SEE LUMBER CLASSIFICATION BEGINNING PAGE 676

TIES—bale

American Steel & Wire Co Rockerfeller Bldg 614 Superior Av N W Cleveland 13 Ohio
Columbia Steel Co Russ Bld San Francisco 6 Cal
A J Gerrard & Co 1950 Hawthorne Av Melrose Park Ill
Keystone Steel & Wire Co Peoria Ill
Mid-States Steel & Wire Co Crawfordsville Ind
Northwestern Steel & Wire Co Sterling Ill
Republic Steel Corp Berger Mfg Div Canton 5 Ohio
Sheffield Steel Corp Sheffield Sta Kansas City Mo
The Stanley Works 195 Lake St New Britain Conn
Tennessee Coal Iron & RR Co U S Steel Corp Sub Birmingham 2 Ala

TIES—concrete form

Copperweld Steel Co Glassport Pa
Evans Pipe Co Uhrichsville Ohio
A J Gerrard & Co 1950 Hawthorne Av Melrose Park Ill
M & M Wire Clamp Co 983-17th Av S E Minneapolis 14 Minn
Richmond Screw Anchor Co Inc 816 Liberty Brooklyn 8 N Y
Sheffield Steel Corp Sheffield Sta Kansas City Mo
Sommer Metalcraft Corp Crawfordsville Ind
Star Expansion Products Co Inc 147 Cedar St NY 6 NY
Williams Form Engineering Corp Grand Rapids 7 Mich

TIES—wall

Alabama Metal Lath Co P O Box 992 Birmingham Ala
American Sheet Metal Works 331 N Alexander St New Orleans La
Bostwick Steel Lath Co Niles Ohio
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Copperweld Steel Co Glassport Pa
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Inland Steel Products Co 4207 W Burnham Milwaukee 1 Wis
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Merwin Mfg Co Erie Pa
Nichols Wire & Aluminum Co Davenport Ia
Reeves Steel & Mfg Co Dover Ohio
St Paul Corrugating Co St Paul 1 Minn
Star Expansion Products Co Inc 147 Cedar St NY 6 NY
Truscon Steel Co Youngstown 1 Ohio
U S Gypsum Co 300 W Adams Chgo 6 Ill
Wheeling Corrugating Co Wheeling W Va

TILE—board, wall

Aetna Plywood & Veneer Co 1732 N Elston Ave Chicago 22 Ill
Alo-Tile Mfg Co Dept L 6351 Grand River Av Detroit 8 Mich
Armstrong Cork Co 4704 Ocean Av Lancaster Pa
Barclay Mfg Co Inc 385 Gerard Av Bronx N Y 51 N Y
Bestile Mfg Co Ontario Calif
Celotex Corp 120 S LaSalle St Chicago 3 Ill
East Coast Tilebord Corp 41-59 Wyckoff Ave Brooklyn 27 N Y
Gibbs Boardtile Corp 615 N Aberdeen Chicago 22 Ill
Homasote Co Dept 50-A Trenton 3 N J
Insulite Division Minnesota & Ontario Paper Co 500 Baker Bldg Minneapolis 2 Minn
Marsh Wall Products Inc Dept 441 Dover Ohio
Masonite Corp Dept AL-47 111 W Washington St Chicago 2 Ill
Milwaukee Plywood Co 1227 W Bruce St Milwaukee 4 Wis
Miratile Mfg Co Inc 600 W 81st St Chicago 20 Ill
Monarch Tile Mfg Corp 15374 Idaho Detroit 3 Mich (steel or aluminum)
Plastergon Wallboard Co PO Box 40 Sta B Buffalo 7 N Y
Prestile Mfg Co 5850 W Ogden Cicero Ill
Roxdale Building Products Corp Dept L-452 2916 White Plains Road N Y 67 N Y
Superior Wall Products Co 4401 N American St Philadelphia 40 Pa
Tylac Co Monticello Ill
U S Gypsum Co 300 W Adams St Chicago 6 Ill
Upson Co Lockport N Y
Wallace Mfg Co 10th & Fayette Kansas City Mo
Williams Products Co Inc 6127 Cedar Av Philadelphia 43 Pa
Wood Conversion Co First National Bank Bldg St Paul 1 Minn
Yankee Fiber Tile Mfg Co 5035 Bellevue Detroit 11 Mich

TILE—clay, drain

Acme Brick Co Fort Worth 2 Tex
Adel Clay Products Co Des Moines Iowa
The Bowerston Shale Co Bowerston Ohio
Chicago Fire Brick Co 1461 N Elston Av Chgo 22 Ill
Clay City Pipe Co Lock Drawer 272 Uhrichsville O
Columbia Pipe Co Columbia S C
Denver Sewer Pipe & Clay Co Denver 1 Colo
Great Falls Brick Co Great Falls Mon
Lehigh Sewer Pipe & Tile Co Ft Dodge Ia
Pacific Clay Products 306 W Av 36 Los Angeles 31 Cal
Sheffield Brick & Tile Co Sheffield Iowa
Stillwater Clay Products Inc 3334 Prospect Av Cleveland 15 Ohio
Streator Drain Tile Co Streator Ill
Stylon Corp 857 Commonwealth Ave Boston 15 Mass
Washington Brick & Lime Co P O Box 2198 Spokane 6 Wash
What Cheer Clay Products Co What Cheer Iowa

TILE—concrete drain

Concrete Products Corp Humboldt Iowa
Graystone Concrete Prod Co 134 Nickerson St Seattle 9 Wash

TILE—floor, asphalt

Armstrong Cork Co 4704 Ocean Av Lancaster Pa
Philip Carey Mfg Co Dept AL-4 Cincinnati 15 Ohio
The Flintkote Co Inc 30 Rockefeller Plaza NY 13 NY
Johns-Manville Corp Box 290 22 E 40th New York 16 N Y
Mastic Tile Corporation of America Dept 34 153 W 57th St New York 19 N Y
Moultile Inc Box 1156 Joliet Ill
Roxdale Bldg Products Corp Dept L-452 2916-18 White Plains Rd N Y 67 N Y
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
Sloane-Blabon Corp Dept AL 1-4 295 Fifth Ave New York 16 N Y
Thomas Moulding Floor Co 165 W Wacker Dr Chicago Ill
Tile-Tex Div Flintkote Co 1232 McKinley Av Chicago Heights Ill
Wm Volker & Co P O Box 168 Kansas City Mo
Williams Products Co Inc 6127 Cedar Av Philadelphia 43 Pa

TILE—floor, non-slip

American Abrasive Metals Co Irvington 11 N J
E Miltenberg Inc 43 Great Jones St New York 12 N Y
National Tile & Mfg Co Anderson Ind
Norton Co 1 New Bond St Worcester 6 Mass
Nukem Products Corp 111 Colgate Av Buffalo N Y
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
The Safe Tread Co Inc 30 Vesey New York 7 N Y
Tile-Tex Div Flintkote Co 1232 McKinley Av Chicago Heights Ill

TILE—glazed

Acme Brick Co Ft Worth 2 Tex
Arketex Ceramic Corp Brazil Ind
Cambridge Tile Mfg Co Cincinnati 15 Ohio (also unglazed)
Chicago Fire Brick Co 1461 N Elston Av Chgo 22 Ill
Denver Sewer Pipe & Clay Co Denver Colo
National Fireproofing Corp Pittsburgh Pa
National Tile & Mfg Co Anderson Ind
Pacific Clay Products 306 West Av 36 Los Angeles 31 Cal
Washington Brick & Lime Co P O Box 2198 Spokane 6 Wash

TILE—gypsum

Certain-teed Products Corp 120 Lancaster Av Ardmore Pa
National Gypsum Co Buffalo 2 N Y
Sealcon Products Inc Minneapolis 2 Minn
U S Gypsum Co 300 W Adams Chgo 6 Ill

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

TILE—hollow building

Acme Brick Co Ft Worth 2 Texas
Adel Clay Products Co Des Moines Iowa
Arketex Ceramic Corp Brazil Ind
Denver Sewer Pipe & Clay Co Denver Colo
Graystone Concrete Prod Co 134 Nickerson St Seattle 9 Wash
Great Falls Brick Co Great Falls Mont
National Fireproofing Corp Pittsburgh Pa
Sealcon Products Inc Minneapolis 2 Minn
Sheffield Brick & Tile Co Sheffield Iowa
Streator Drain Tile Co Streator Ill
U S Gypsum Co 300 W Adams Chicago 6 Ill
Washington Brick & Lime Co Box 2198 Spokane 6 Wash

TILE—metal, wall

Alloy Tile Corp 109 Roosevelt Av Belleville N J
Bestile Mfg Co Ontario Calif
Ohio Can & Crown Co Dept AL Massillon Ohio
Metal Tile Products Inc Hastings Mich
Roxdale Bldg Products Corp Dept L-452 2916 White Plains Rd N Y 67 N Y
Vikon Tile Corp Dept AL-2 Washington N J
Wheeling Corrugating Co Wheeling West Virginia
Yankee Fiber Tile Mfg Co 5035 Bellevue Ave Detroit 11 Mich

TILE—plastic wall

A-1 Plastic Molders Inc 1415 Diversey Pkwy Chicago 14 Ill
Cermak Tile Co Inc 4901 Brookpark Rd Cleveland 29 Ohio
Hachmeister Inc 2332 Forbes St Dept AL-1 Pittsburgh Pa
Jones & Brown Inc 439 Sixth Ave Pittsburgh 19 Pa
Lustro Tile Mfg Co Akron 8 Ohio
S & W Moulding Co 980 Parsons Av Columbus O
Pioneer Co 1050-54 Century Bldg Pittsburgh 22 Pa
Plastic Products Co 6467 Georgia Av Detroit 11 Mich
Roddis Plywood Corp Marshfield Wis
Stylon Corp 857 Commonwealth Ave Boston 15 Mass
Superior Plastics Div Commonwealth Plastics Inc 414-430 N Oakley Blvd Chicago 12 Ill
The Tile-Rite Co 5109 Euclid Av Cleveland 3 Ohio
Tile-Tex Div Flintkote Co 1232 McKinley St Chicago Heights Ill
Wilson Plastics Inc 1531 Milan Rd Sandusky O
Yankee Fiber Tile Mfg Co 5035 Bellevue Ave Detroit 11 Mich

TILE—quarry

Adel Clay Products Co Des Moines Iowa
Arketex Ceramic Corp Brazil Ind
Mosaic Tile Co Zanesville Ohio
Murray Tile Co Cloverport Ky
Pacific Clay Products 306 W Ave 26 Los Angeles 31 Calif
Washington Brick & Lime Co P O Box 2198 Spokane 6 Wash
Wheeling Tile Co Wheeling W Va

TILE—Rubber, floor

American Tile & Rubber Co Trenton N J
American Rubber Co Huntsville Ala
Armstrong Cork Co 4704 Ocean Av Lancaster Pa
Fremont Rubber Co 310 McPherson Highway Fremont O
The B F Goodrich Co Akron Ohio
Goodyear Tire & Rubber Co Inc Akron O
Hood Rubber Co Inc Watertown Mass
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
Palladium Products 6127 Cedar Av Philadelphia 43 Pa
RCA Rubber Co 1833 E Market St Akron 5 Ohio
Roxdale Building Products Corp Dept L-452 2916 White Plains Rd New York 67 N Y
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
Sloane-Blabon Corp Dept AL 1-4 295 Fifth Ave New York 16 N Y
U S Rubber Co 1230 Avenue of the Americas New York 20 N Y
Wm Volker & Co P O Box 168 Kansas City Mo
Wright Rubber Products Co Houston 5 Tex

TIMBER APPRAISERS & ESTIMATORS

Associates Inc PO Box 5254 New Orleans La
C V Clarke P O Box 1385 Jackson Miss
W D Durland & Co 4411 Carowdelet St New Orleans 15 La
Thos F Grayson Prescott 5 Ark
The James Lacey Company 231 S La Salle St Chgo 4 Ill
Lemieux Bros Inc 309 Pere Marquette Bldg New Orleans 12 La
James W Sewall Co Old Town Me
H M Spain & Co Commerce Title Bldg Memphis Tenn

TIMBER CONNECTORS

Cleveland Steel Spec Co Inc 3765 E 91st St Cleveland 5 Ohio
Timber Engineering Co 1319 Eighteenth St NW Washington 6 D C
Timber Structures Inc Portland 8 Ore
Unit Structures Inc Peshtigo Wis

TIME CLOCKS, RECORDERS

The Cincinnati Time Recorder Co 1733 Central Av Cincinnati 14 Ohio
Service Recorder Co 1375 Euclid Av Cleveland 15 Ohio

TIRES & TUBES, truck

The Dayton Rubber Co 2342 W Riverview Av Dayton 1 Ohio
Gates Rubber Co 999 S Broadway Denver 17 Colo
General Tire & Rubber Co Akron 9 Ohio
The B F Goodrich Co Akron Ohio
Goodyear Tire & Rubber Co Inc Akron Ohio
Firestone Tire & Rubber Co Pottstown Pa
Kelly-Springfield Tire Co Cumberland Md
Mansfield Tire & Rubber Co 515 Newman St Mancfield Ohio
Swan Rubber Co Bucyrus Ohio
United States Rubber Co 1230 Avenue of the Americas New York 20 N Y

TOOLS—boring

Armstrong Bros Tool Co 5300 W Arm-Strong Av Chicago Ill
Circo Tool Co Milwaukee 3 Wis
Gairing Tool Co Detroit Mich
Greenlee Tool Co Div of Greenlee Bros & Co 2136-12th St Rockford Ill
Mephisto Tool Co Inc Hudson N Y (auger bits)
Milwaukee Electric Tool Corp 5364 W State St Milwaukee 8 Wis
The Precision Tool Co Inc P O Box 155 Brooklyn 1 N Y
Sandvik Saw & Tool Div of Sandvik Steel Inc 47 Warren St New York 7 N Y
Stanley Tools Div of Stanley Works 111 Elm St New Britain Conn
J D Wallace Mfg Co 134 S California Av Chicago 12 Ill

TOOLS—carpenter

E C Atkins & Co 402 S Illinois St Indianapolis 9 Ind
Cedarberg Mfg Co 545 S 4th St Minneapolis 15 Minn
Empire Level Mfg Co 10930 W Potter Rd Milwaukee 13 Wis
Greenlee Tool Co Div of Greenlee Bros & Co 2136 12th St Rockford Ill
Heller Bros Co Newark 4 N J
Leetonia Tool Co Leetonia Ohio
Mayhew Steel Products Inc Shelburne Falls Mass
Millers Falls Co Greenfield Mass
Milwaukee Electric Tool Corp 5364 W State St Milwaukee 8 Wis
Ox-Wall Tool Co 928 Broadway New York 10 N Y
Peck Stow & Wilcox Co Southington Conn
RCS Tool Sales Corp PO Box 1434 Joliet Ill
Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Stanley Tools Div of Stanley Works 111 Elm St New Britain Conn
L S Starrett Co Athol Mass
John Stortz & Son Inc Philadelphia 6 Pa
Vaughan & Bushnell Mfg Co 135 S LaSalle St Chgo 3 Ill

TOOLS—garden, lawn

American Fork & Hoe Co 1623 Euclid Av Cleveland 15 Ohio
Ames Baldwin Wyoming Co Parkersburg W Va
Buch Mfg Co Elizabethtown Pa
A B Carlson & Co 349 Woodlawn Av Aurora 9 Ill
Franklin Equipment Co Monticello Ia
Green Thumb Inc 2103 Race St Philadelphia 3 Pa
Porter-Cable Machine Co 1714 N Salina St Syracuse 8 N Y
D B Smith & Co 435 Main St Utica N Y
Tuck Mfg Co Brockton 39 Mass (also weeder)
Union Fork & Hoe Co Columbus O
Vernontown Mfg Co Inc 340 W Lincoln Av Mt Vernon N Y

TOOLS—Masons, plasterers

Cedarberg Mfg Co 545 S 4th St Minneapolis 15 Minn
John H Graham Co Inc 105 Duane St NY 8 NY
Goldblatt Tool Co 1924 Walnut St Kansas City 8 Mo
Heller Bros Co Newark 4 N J
William Johnson Inc 20 Kent St Newark N J
Mayes Bros Tool Mfg Co Port Austin Mich
John Stortz & Son Inc Philadelphia 6 Pa
Vaughn & Bushnell Mfg Co 135 S Lasalle St Chicago 3 Ill
Vernontown Mfg Co Inc 340 W Lincoln Av Mt Vernon N Y

TOOLS—painters' & paperhangers'

Black Panther Tool Co 401 N Broad St Philadelphia 8 Pa
Collmer Bros South Bend 4 Ind
Clyde Cutlery Co Clyde Ohio
Devoe & Raynolds Co Inc 787 First Av New York 17 N Y
Empire Level Mfg Co 10930 W Potter Rd Milwaukee 13 Wis
Fond du Lac Roller Corp P O Box 551 Fond du Lac Wis
Hood Bros 4326 Orchard St Philadelphia 24 Pa
Murray-Black Co Springfield O
Pioneer Tool Co Inc Bloomfield N J
Pittsburgh Plate Glass Co Dept D3 Baltimore Md
Red Devil Tools Irvington 11 N J
Ridgely Trimmer Co Springfield O
Stencil Specialty Co Jersey City N J
John Stortz & Son Inc Philadelphia 6 Pa
Warner Mfg Co 801 16th Av SE Minneapolis 14 Minn
Wendell Mfg Co 4234 N Lincoln Av Chgo 18 Ill

TOOLS—plumbers'

Armstrong Bros Tool Co 300 N Francisco Av Chgo Ill
Armstrong Mfg Co 333 Knowlton St Bridgeport 8 Conn
Baltimore Tool Works Baltimore 30 Md
Delaware Tool Steel Corp Wilmington 99 Del
Greenlee Bros Tool Co Div of Greenlee Bros & Co 2136-12th St Rockford Ill
Mephisto Tool Co Inc Hudson N Y
Millers Falls Co Greenfield Mass
Milwaukee Electric Tool Corp 5364 W State St Milwaukee 8 Wis
P & C Hand Forged Tool Co Portland 22 Ore
Peck Stow & Wilcox Co Southington Conn
Proto Tools 2209 Santa Fe Av Los Angeles 54 Calif
John Stortz & Son Inc Philadelphia 6 Pa
Vaughn & Bushnell Mfg Co 135 S LaSalle Chicago 3 Ill
Wilde Drop Forge & Tool Co Kansas City 8 Mo

TOOLS—portable electric

American Floor Surfacing Mach Co 521 So St Clair St Toledo 3 Ohio
Black & Decker Mfg Co Dept H-640 Towson 4 Md
Burgess Vibrocrafters Inc 180 N Wabash Chgo Ill
Chicago Pneumatic Tool Co 6 E 44th St New York 17 N Y
Consolidated Machinery & Supply Co Ltd 2031 Santa Fe Av Los Angeles Calif
Delta Power Tool Div Rockwell Mfg Co 693-D E Vienna Ave Milwaukee 1 Wis
Independent Pneumatic Tool Co Aurora Ill
Mall Tool Co 7733 South Chicago Av Chicago 19 Ill
Millers Falls Co Greenfield Mass

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Milwaukee Electric Tool Corp 5364 W State St Milwaukee 8 Wis
Porter-Cable Machine Co 1714 N Salina St Syracuse 8 N Y
Skilsaw Inc 5033 N Elston Av Chgo 30 Ill
Stanley Electric Tools 111 Elm New Britain Conn
Syntron Co Homer City Pa
J D Wallace & Co 153 S California Chicago 12 Ill

TOOLS—sheet metal workers'

Badger Corrugating Co La Crosse Wis
W H Compton Shear Co 314 Camden St Newark 3 N J
Hood Bros 4326 Orchard St Philadelphia 24 Pa
L S Starrett Co Athol Mass

TOOLS—split ring grooving

Cleveland Steel Specialty Co Inc 3765 E 91st St Cleveland 5 Ohio
Timber Engineering Co 1319 18th St N W Washington 6 D C
Vaughn & Bushnell Mfg Co 135 S LaSalle St Chicago 3 Ill

TORCHES—blow

Aeroil Burner Co Inc Park Av & 57th St West New York N J
Badger Corrugating Co La Cross Wis
Otto Bernz Co Rochester N Y
Cedarberg Mfg Co 545 S 4th St Minneapolis 15 Minn
Detroit Torch & Mfg Co Detroit Mich
Everhot Mfg Co Maywood Ill
Hauck Mfg Co 126 10th Brooklyn N Y
Lenk Mfg Co 30-38 Summington St Boston 15 Mass
The Macleod Co 2236 Bogen St Cincinnati 22 Ohio
The Turner Brass Wks Sycamore Ill
P Wall Mfg Co Grove City Pa

TRACTORS

Allis-Chalmers Mfg Co Tractor Div Milwaukee 1 Wis
Buda Co Harvey Ill
Caterpillar Tractor Co Peoria 8 Ill
Detroit Hoist & Machine Co 8231 Morrow St Detroit 11 Mich
Elwell-Parker Electric Co 4205 St Clair Av Cleveland 3 Ohio
International Harvester Co 180 N Michigan Chgo 1 Ill
Mack-International Motor Truck Corp 350 Fifth Av New York 1 N Y
Massey-Harris Co Racine Wis
The Oliver Corp Industrial Div 19300 Euclid Av Cleveland 17 Ohio
Elwell Parker Elec Co Cleveland Ohio

TRAILERS—commercial

Dorsey Trailers Elba Ala
Eberhard Mfg Co Div Eastern Malleable Iron Co Cleveland 4 Ohio
Fruehauf Trailer Co Detroit 32 Mich
Knox Corp Thomson Ga
W C Nabors Co Mansfield La
A Streich & Bros Co Oshkosh Wis
Trailmobile Co Cincinnati 9 Ohio
Utility Trailer Mfg Co Los Angeles 54 Calif
Wentworth & Irwin Portland Ore

TRAILERS—logging

Carter Mfg Co Memphis 2 Tenn
Dorsey Trailers Elba Ala
Fruehauf Trailer Co Detroit 32 Mich
International Harvester Co 180 N Michigan Av Chgo 1 Ill
W C Nabors Co Mansfield La
Page & Page Co 0605 S W Curry Portland 1 Ore
Pointer Willamette Co Portland Ore
A Streich & Bros Co Oshkosh Wis
Utility Trailer Mfg Co Los Angeles 54 Calif
Wentworth & Irwin Portland Ore

TRAILERS—platform industrial

Beall Pipe & Tank Corp Portland Ore
Fruehauf Trailer Co Detroit 32 Mich
Hamilton Caster & Mfg Co Hamilton O
International Harvester Co 180 N Michigan Av Chgo 1 Ill
Lewis-Shepard Products Co 236 Walnut St Watertown 72 Mass
Mercury Mfg Co 4044 S Halsted Chgo Ill
Nutting Truck & Caster Co 1125 W Division St Fairbault Minn
Pointer Willamette Co Portland Ore
A Streich & Bros Co Oshkosh Wis
Tucker-Dorsey Mfg Co Indianapolis 6 Ind
Wentworth & Irwin Inc 123 NE Oregon St Portland 14 Ore

TRANSITS—surveyors

Eugene Dietzgen Co 2425 N Sheffield Chgo Ill
Goldblatt Tool Co 1924 Walnut St Kansas City Mo
Warren-Knight Co 136 N 12th St Philadelphia 7 Pa

TRAPS—steam

C A Dunham Company 450 E Ohio Chgo Ill
Grinnell Co Providence R I
James P Marsh Corp Skokie Ill
Moore Dry Kiln Co 1220 W State St Jacksonville 1 Fla
The Trane Co LaCrosse Wis

TREADS—stair

American Abrasive Metals Co Irvington N J
American Mason Safety Tread Co Box 310 Lowell Mass
Blaw Knox Co Pittsburgh Pa
Carr Adams & Collier Co Dubupue Ia
Cole Mfg Co PO Box 2657 Memphis 2 Tenn
Curtis Cos Clinton Ia
Davis & Siehl 4032 Hamilton Av Cincinnati 23 Ohio
Farley & Loetscher Mfg Co Dubuque Ia
Huttig Sash & Door Co 1206 S Vandeventer Av St Louis 10 Mo
Inland Steel Co 38 S Dearborn Chgo 3 Ill
Logan Co Inc Louisville 6 Ky
Marquart Millwork Co Oshkosh Wis
Metal Crafters 1756 E Av NE Cedar Rapids Ia
Safe Tread Co Inc 30 Vesey NY 7 NY
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
F P Smith Wire & Iron Works 2340 Clybourn Av Chicago 14 Ill
U S Rubber Co 1230 Avenue of the Americas New York 20 N Y
Wooster Products Inc Wooster Ohio (safety)
Youngstown Manufacturing Inc 66 S Prospect Youngstown 6 Ohio

TREADS—wood

SEE LUMBER CLASSIFICATION BEGINNING PAGE 676

TRELLIS—wood

Beh & Co 1150 Broadway NY 1 NY
Concord Woodworking Co Inc 457 Main St West Concord Mass
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
E A Vandy 14105 Merchandise Mart Chicago 54 Ill

TRIM—door & window, wood

Dierks Lumber & Coal Co Dierks Bldg 1006 Grand Av Kansas City 6 Mo
Firpine Products Co PO Box 188 Oswego Oregon

TRIM SHAPES—metal

Allmetal Weatherstrip Co 2243 N Knox Av Chicago 39 Ill
Aluminum Co of America 827-D Gulf Bldg Pittsburgh 19 Pa
Ames Metal Moulding Co 225 E 144th St New York 51 New York (aluminum)
B & T Metals Co 425 W Town St Columbus 16 Ohio
Ford Metal Moulding Co 2701 Bridge Plaza North Long Island City N Y
Loxit Moulding Co 1217 W Washington Blvd Chicago 7 Ill
Macklanburg-Duncan Co Oklahoma City 1 Okla
Marsh Wall Products Inc Dept 441 Dover O
Metal Trims Inc PO Box 1072 Youngstown 1 Ohio
S & W Moulding Co 980 Parsons Av Columbus 6 Ohio
Trimedge Inc Youngstown 1 Ohio
R D Werner Co Inc 295 Fifth Av New York 16 N Y
Wollaeger Steel Corp 61 Broadway NY 6 NY
Youngstown Manufacturing Inc 66 S Prospect Youngstown 6 Ohio

TRIM SHAPES—plastic

Cass Products Inc 6127 N Cicero Av Chicago 30 Ill
Chicago Wood & Plastic Plants 4444 Irving Park Chicago Ill
Commonwealth Plastics Inc Superior Plastics Div 426 N Oakley Blvd Chicago 12 Ill
Extruded Plastics Inc Norwalk Conn
Macklanburg-Duncan Co Oklahoma City 1 Okla
Marsh Wall Products Co 441 Main St Dover Ohio
S & W Moulding Co 980 Parson Av Columbus 6 Ohio
R D Werner Co Inc Dept AL 285 Fifth Av N Y 16 New York
Wooster Products Inc Wooster Ohio
Youngstown Manufacturing Inc 66-76 S Prospect Youngstown 6 Ohio

TRUCK BODIES

Carter Mfg Co Memphis 2 Tenn
Indiana Body Co 615-621 S H St Richmond Ind
Marion Metal Products Co Marion Ohio
Morrison Steel Products Inc 683 Amherst St Buffalo 7 N Y
Pointer-Willamette Co Portland 5 Ore
A Streich & Bros Co Oshkosh Wis
Stoughton Cab & Body Co Stoughton Wis

TRUCK BODIES—steel dump

Anthony Co Streator Ill
Beall Pipe & Tank Corp Portland Ore
Heil Co Milwaukee Wisc
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Marion Metal Products Co Marion Ohio
Pointer-Willamette Co Portland 5 Ore
St Paul Hydraulic 2207 University Av S E Minnesota 14 Minn

TRUCK BODIES—wood cargo

Fordyce Lumber Co Fordyce Ark
E S Gaynor Lbr Co Sioux City 1 Ia
Indiana Body Co 615 S H St Richmond Ind
Perfection Steel Body Co Galion Ohio
Pointer-Willamette Co Portland 5 Ore
A Streich & Bros Co Oshkosh Wis
Wentworth & Irwin Portland Ore

TRUCK CABS

Four Wheel Drive Auto Co Clintonville Wis
Indiana Body Co 615-621 S H St Richmond Ind
Stoughton Cab & Body Co Stoughton Wis
Wentworth & Irwin Inc 123 NE Oregon St Portland 1 Ore

TRUCKS—dry kiln

American Car & Foundry Co 30 Church NY NY
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Grand Rapids Dry Kiln Co 1525 Jefferson Av Grand Rapids Mich
Hyster Co 2979 N E Clackamas Portland 8 Ore & Peoria 1 Ill
Lewis-Shepard Products Inc 236 Walnut St Watertown 72 Mass
Mighty Midget Co 1481 Parkway Blvd Alliance Ohio
Moore Dry Kiln Co 1220 W State St Jacksonville 1 Fla
Standard Dry Kiln Co Indianapolis Ind

TRUCKS—hand

Anthony Truck Co Paducah Ky
Colson Corp Elyria O
Fairbanks Co 393 Lafayette NY 3 NY
Grand Specialties Co 3101 W Grand Av Chicago 22 Ill
Hamilton Caster & Mfg Co Hamilton O
Howe Scale Co Rutland Vt
Lewis-Shepard Products Inc 236 Walnut St Watertown 72 Mass
Morse Metal Products Co Inc 295 E 2nd St New York 9 N Y
Nutting Truck & Caster Co Inc 1125 W Division St Faribault Minn
Revolvator Co Route 1 at 86th St North Bergen N J

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

The Sabin Machine Co 6536 Carnegie Av Cleveland 3 Ohio
Service Caster & Truck Corp Albion Mich
A Streich & Bros Co Oshkosh Wis
The Rapids-Standard Co Inc 235 Rapistan Bldg Grand Rapids 2 Mich
Tucker-Dorsey Mfg Co Indianapolis 6 Ind
Twin Tilt Truck Co PO Box 11 St Bernard Cincinnati 17 Ohio
Yale & Towne Mfg Co Phil Pa

TRUCKS—lift

Automatic Transporation Co Div of Yale & Towne Mfg Co 101 W 87th Chicago 20 Ill
Buda Co Harvey Ill
Clark Equip Co Tructractor Div Battle Creek 40 Mich
Colson Corp Elyria O
Elwell Parker Elec Co 4205 St Clair Av Cleveland 3 Ohio
Erickson Power Lift Trucks Inc 1413 Marshall St N E Minneapolis 13 Minn
Gerlinger Carrier Co P O Box 338 Dallas Ore
Grand Specialties Co 3101 W Grand Av Chicago 22 Ill
The Hamilton Caster & Mfg Co Hamilton Ohio
Howe Scale Co Rutland Vt
Hyster Co 2979 N E Clackamas Portland Ore & Peoria 1 Ill
Lewis-Shepard Products Inc 236 Walnut St Watertown 72 Mass
Morse Metal Products Co Inc 295 E 2nd St N Y 9 N Y
Moto-Truc Co 1953 E 59th St Cleveland 3 Ohio
Revolvator Co North Bergen N J
Ross Carrier Co Benton Harbor Mich
Service Caster & Truck Corp Albion Mich
Silent Hoist & Crane Co 860 63rd Brooklyn 20 N Y
Yale & Towne Mfg Co Phil Pa

TRUCKS—mill & factory

Buda Co Harvey Ill
Chattanooga Wheelbarrow Co 1311 E Main St Chattanooga 2 Tenn
Clark Equip Co Tructractor Div Battle Creek 40 Mich
Colson Corp Elyria O
Erickson Power Lift Trucks Inc 1413 Marshall St NE Minneapolis 13
Fairbanks Co 393 Lafayette NY 8 NY
Chas E Francis Co Huntington Ind
Hamilton Caster & Mfg Co Hamilton O
Howe Scale Co Rutland Vt
Hyster Co 2979 N E Clackamas Portland Ore & Peoria 1 Ill
Lewis-Shepard Products Inc 236 Walnut St Watertown 72 Mass
Orangeville Mfg Co Orangeville Pa
Service Caster & Truck Div of Domestic Industries Inc Albion Mich
Stackbin Corp Providence R I
The Rapids-Standard Co Inc 235 Rapistan Bldg Grand Rapids 2 Mich
Revolvator Co U S Route 1 at 86th St North Bergen N J
Service Caster & Truck Corp Albion Mich
Tucker-Dorsey Mfg Corp Indianapolis Ind
Yale & Towne Mfg Co Phil Pa

TRUCKS—motor

Autocar Co Ardmore Pa
Brockway Motor Co Inc Cortland N Y
Chevrolet Motor Div General Motors Corp Detroit 2 Mich
Diamond T Motor Car Co 4401 W 26th St Chicago 23 Ill
Dodge Div Chrysler Corp Detroit Mich
Federal Motor Truck Co Detroit Mich
Ford Motor Co 3270 Schaefer Rd Dearborn Mich
Four Wheel Drive Auto Co Clintonville Wis
General Motors Truck Co Pontiac Mich
International Harvester Co 180 N Michigan Av Chgo 1 Ill
Kenworth Motor Truck Corp Seattle 11 Wash
Mack-International Motor Truck Corp 350 5th Av NY 1 NY
Reo Motors Inc Lansing 20 Mich
Sterling Motor Truck Co Inc 2021 S 54th St Milwaukee 1 Wis
Stewart Motor Corp Buffalo N Y
The Studebaker Corp 635 S Main South Bend Ind
White Motor Co Cleveland O
Willys-Overland Motors Inc Toledo O

TRUSSES—roof, steel

American Bridge Co U S Steel Sub Frick Bldg Pittsburgh 19 Pa
Bethlehem Steel Co Bethlehem Pa
Ceco Steel Products Corp 5601 W 26th St Chicago 50 Ill
Erie Steel Construction Co Erie Pa
Gabriel Steel Co 13700 Sherwood Detroit 12 Mich
Geo L Mesker Steel Corp Evansville Ind
Republic Steel Corp Cleveland 1 Ohio
Reynolds Metals Co Bldg Products Div 2002 S 9th St Louisville 1 Ky
St Paul Foundry & Mfg Co St Paul 3 Minn
Southern Wire & Iron Wks 441 Memorial Dr SE Atlanta Ga

TRUSSES—roof, wood

American Roof Truss Co 6846 Stony Island Av Chgo 49 Ill
McKeown Bros Co 5235 S Keeler Av Chicago 32 Ill
Rilco Laminated Products Inc 2521 First National Bank Bldg St Paul 1 Minn
Roof Structures Inc 45 W 45 NY NY
Super-Structures Inc Albert Lea Minn
Tacoma Lumber Fabricating Co Tacoma 1 Wash
Timber Structures Inc Portland 8 Ore
Unit Structures Inc Peshtigo Wis
Weyerhaeuser Sales Co St Paul 1 Minn

TUBS—laundry

Alberene Stone Corp of Virginia 419 4 Ave NY NY
General Ceramics Co Metuchen N J
Johnson& Carlson 848 W Eastman Chicago 22 Ill (wood)
Reeves Steel & Mfg Co Dover O
Rusiander & Sons Inc 18 Letchfield Ft Buffalo 13 N Y
Standard-Elsmere Granite Co 1754 N Spaulding Chgo Ill
Trenton Potteries Co Trenton N J
Wheeling Corrugating Co Wheeling West Va

TURNBUCKLES

Arro Expansion Bolt Co Box 388 Marion O
Commercial Shearing & Stamping Inc 5767 W 65th St Chicago 38 Ill
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Hubbard & Co 6301 Butler St Pittsburgh 1 Pa
Chas O Larson Co Sterling Ill
The Thomas Laughlin Co 143 Fore St Portland 6 Maine
Leitelt Iron Wks Grand Rapids 2 Mich
Maine Steel Products Inc South Portland Maine
National Mfg Co Sterling Ill
Newhall Chain Forge & Iron Co 48 W Broadway N Y 7 N Y
John A Roebling's Sons Co 640 S Broad St Trenton N J
Russell-Erwin Div The American Hdwe Corp New Britain Conn
St Louis Screw & Bolt Co 6900 N Broadway St Louis 15 Mo
Sheffield Steel Corp Kansas City Mo
Stronghold Screw Products Inc 222 W Hubbard Chicago 10 Ill
U S Expansion Bolt Co York Pa
Upson-Walton Co Cleveland O
Wilcox Crittenden & Co Inc Middletown Conn

TRUNTABLES—lumber

American Mfg Co Inc Tacoma 2 Wash
Leitelt Iron Wks Grand Rapids 2 Mich
Moore Dry Kiln Co 1220 W State St Jacksonville 1 Fla
Revolvator Co U S Route 1 at 86th St North Bergen N J
Standard Dry Kiln Co P O Box 541 Indianapolis Ind

TURPENTINE

American Turpentine & Tar Co Ltd New Orleans La
American Turpentine Farmers Assn Valdosta Ga (gum)
Columbia Naval Stores Co Savannah Ga
Devoe & Raynolds Co Inc 787 1st Av New York 17 N Y
Elroy Naval Stores Vidalia Ga
Felton Sibley & Co Inc 136 N 4th St Philadelphia 6 Pa
Gordon Chemical Co 1700 Hickory St Kansas City 11 Mo
Gum Turpentine Farmers' Cooperative Assn Vidalia Ga
Industrial Chemical Sales Div West Virginia Pulp & Paper Co New York Central Bldg NY NY
Newport Industries Inc 230 Park Av N Y 17 N Y
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
Southern Pine Chemical Co Div of The Glidden Co Jacksonville Fla

UNDER-REAMERS

B & R Co PO Box 93 Plano Tex

V BELT DRIVES

Allis-Chalmers Mfg Co Milwaukee Wis
Broadway Rubber Mfg Co 529 E Broadway Louisville 2 Ky
Fairbanks Morse & Co 600 S Michigan Av Chgo Ill
Gates Rubber Co 999 S Broadway Denver 17 Colo
Webb Belting Co 1505 W 12th St Kansas City Mo

V BELT & BELTING

Allis-Chalmers Mfg Co Milwaukee 1 Wis
Broadway Rubber Mfg Co 529 E. Broadway Louisville 2 Ky
Chicago Rawhide Mfg Co 1301 N Elston Chgo Ill
Dayton Rubber Mfg Co 2342 W Riverview Av Dayton 1 Ohio
Durkee-Atwood Co Minneapolis Minn
Firestone Industrial Products Co Pottstown Pa
Gates Rubber Co 999 S Broadway Denver 17 Colo
The B F Goodrich Co Akron Ohio
Goodyear Tire & Rubber Co Inc Akron O
Manheim Mfg & Belting Co Manheim Pa
Raybeston-Manhattan Inc Passaic N J
Republic Rubber Div Lee Rubber & Tire Corp Youngstown Ohio
Rockwood Mfg Co Indianapolis Ind
Thermoid Co Trenton N J
United States Rubber Co 1230 Avenue of the Americas New York 20 N Y
Webb Belting Co 1505 W 12th St Kansas City 7 Mo

VALVES—dry kiln, control

Crane Co 836 S Michigan Av Chicago 5 Ill
Foxboro Co Foxboro Mass
Moore Dry Kiln Co 1220 W State St Jacksonville 1 Fla
Standard Dry Kiln Co 798 S Harding St Indianapolis Ind

VARNISH

Adelphi Paint & Color Works Inc 86-00 Dumont Av Ozone Park 17 N Y
American Varnish Co 1138 N No Branch Cngo 22 Ill
Boston Varnish Co Boston 49 Mass
Breinig Brothers Inc 1st & Harrison Hoboken N J
Chi-Namel Paint & Varnish Co Minneapolis Minn
Devoe & Raynolds Co Inc 787 1st Av New York 17 N Y
E I du Pont de Nemours & Co Wilmington 98 Del
Elliott Paint & Varnish Co 4525 W Fifth Av Chgo 24 Ill
Excelsior Varnish Works Inc 1218 W 74th St Cleveland 2 Ohio
Felton Sibley & Co Inc 136 N 14th St Philadelphia 6 Pa
Foy Paint Co Inc 1776 Mentor Av Cincinnati 12 Ohio
Gillespie Varnish Co Dey & Howell Sts Jersey City 6 N J
Glidden Co Cleveland 2 Ohio
Grand Rapids Varnish Co Grand Rapids 2 Mich
Harrison Paint & Varnish Co Canton 1 Ohio
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
R F Johnston Paint Co 3925 Huston Av Cincinnati 12 Ohio
Keystone Varnish Co 71 Otsego St Brooklyn 31 N Y
Lowe Bros Co Dayton 2 Ohio
The O'Brien Corp Dept L-4 South Bend 21 Ind
Patterson Sargent Co 1325 E 38th St Cleveland 14 Ohio
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 22 Pa

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Pratt & Lambert Inc 75 Tonawanda Buffalo 7 NY
Seidlitz Paint & Varnish Co 18th & Garfield Sts Kansas City Mo
Sewall Paint & Varnish Co 1306 River St Dallas 2 Tex
Sherwin-Williams Co Cleveland O
Standard Industrial Products Inc Box 325 Evansville 4 Ind
Standard Varnish Wks 2600 Richmond Terrace Staten Island 3 N Y
20th Century Paint & Varnish Corp 456 Driggs Av Brooklyn 11 N Y
United Gilsonite Labs Scranton 1 Pa
U S Gypsum Co 300 W Adams Chicago 6 Ill
Valentine & Co Inc 11 E 36th St New York N Y
Vita-Var Corp 1180 Raymond Blvd Newark N J

VARNISH REMOVER

Acorn Refining Co 8001 Franklin Blvd Cleveland O
American Varnish Co 1138 N North Branch Chicago 22 Ill
Boyle-Midway Inc 257 Cornelison Av Jersey City 2 N J
Breinig Bros Inc Hoboken N J
Briggs-Maroney Co Inc 85 Paris St Everett 49 Mass
Chi-Namel Paint & Varnish Co Minneapolis Minn
Devoe & Raynolds Co Inc 787 1st Av New York 17 N Y
E I du Pont de Nemours & Co Inc Wilmington 98 Dela
Elliott Paint & Varnish Co 4525 W 5th Av Chgo 24 Ill
Glidden Co Cleveland O
Lowe Bros Co Dayton 2 Ohio
Murphy Paint Div Interchemical Corp 231 Grant Av East Newark N J
The O'Brien Corp Dept L-4 South Bend 21 Ind
Patterson-Sargent Co 1325 E 38th St Cleveland 14 Ohio
Pittsburgh Plate Glass Co PO Box 551 Pittsburgh 22 Pa
Pratt & Lambert Inc 75 Tonawanda Buffalo 7 NY
Savogran Co 25 Huntington Av Boston 16 Mass
Schalk Chemical Co 351 E Second St Los Angeles 12 Calif
Seidlitz Paint & Varnish Co 18th & Garfield Sts Kansas City Mo
Toch Bros Inc 2600 Richmond Terr Staten Island 3 N Y
Valentine & Co Inc 11 E 36th St New York N Y
Wadsworth Howland & Co 141 Federal St Boston Mass

VENEERS—hardwood

W R Braund Co Suite 214 Wabeek Bldg Birmingham Mich
Darlington Veneer Co Darlington S C
Higgins Inc New Orleans La
Nickey Bros Co Memphis 12 Tenn
Pearl City Plywood Co Inc Jamestown N Y
Weber Veneer & Plywood Co Shawano Wis

VENETIAN BLINDS

Artistic Venetian Blind Co 1955 Park Av NY NY
Bills Venetian Blind Co 5459 S Lake Av Chicago 15 Ill
Bostwick-Goodell Co Norwalk O
Clark & Hammer Inc Belleville N J
Clifton Mfg Co PO Drawer 2029 Waco Tex
Columbia Mills Inc 225 5 Av NY NY
Consolidated Venetian Blind Co 2401 Nicholson St Houston 8 Tex
Crawford-Austin Mfg Co Waco Tex
Ellis Venetian Blind Co 5459-69 Lake Park Av Chicago 15 Ill
Flint Venetian Blind Mfg Co Flint 5 Mich
W E Hettrick & Son Co PO Box 377 Toledo 1 Ohio
Hough Shade Corp Janesville Wis
Mackin Venetian Blind Co Momence Ill
Mars Venetian Blinds Le Mars Ia
Modern Venetian Blinds Inc 261 Fifth Av New York 16 N Y
Rolscreen Co Pella Ia
Wm Volker & Co Box 168 Kansas City Mo
Warren Venetian Blind Co 2907 E Hennepin Av Minneapolis 13 Minn
Yardley Venetian Blind Co 138 Parsons Av Columbus 15 Ohio

VENETIAN BLIND SLATS

Acme Steel Co Dept AL-40 2840 Archer Av Chgo 8 Ill
American Rule & Block Co Menominee Mich
Bills Venetian Blind Co 5459 Lake Park Av Chgo 51 Ill
Chicago Wood & Plastic Plants 4201 Irving Park Blvd Chicago 41 Ill (wood)
Evans Products Co Dept S-14 Plymouth Mich
G B Lewis Co Watertown Wis
Mackin Venetian Blind Co Momence Ill
Oshkosh Wood Products Corp Oshkosh Wis
S E Overton Co So Haven Mich
Wm Volker & Co P O Box 168 Kansas City Mo

VENTILATORS—farm, poultry, houses, etc

Air Devices Inc 17 E 42nd St New York 17 N Y
Badger Corrugating Co La Crosse Wis
Clay Equipment Corp Cedar Falls Ia
Coburn Mfg Co Whitewater Wis
De Vilbiss Co 300 Phillips Av Toledo 1 Ohio
Edwards Mfg Co 427 Culvert St Cincinnati 2 Ohio
Emerson Electric Mfg Co 8100 Florissant Av St Louis 21 Mo
A D Hemphill Co 129 S Franklin St Lake City Minn
Inland Steel Products Co 4207 W Burnham Milwaukee 1 Wis
James Mfg Co Fort Atkinson Wis
King Company Owatonna Minn
Krauser-Boyd Inc 553 River Rd N Tonawanda N Y
Leigh Building Products Div of Air Control Products Inc Coopersville Mich
Louden Machinery Co Fairfield Ia
Nu Tone Inc Dept AL-4 Red Bank & Madison Rd Cincinnati 27 Ohio
Olson Mfg Co Albert Lea Minn
Peerless Electric Co Warren O
Pennsylvania Wire Glass Co 1612 Market St Philadelphia 3 Pa
Shepler Mfg Co 1312 Sheffield St Pittsburgh 33 Pa
Starline Inc Harvard Ill
U S-Challenge Co 38 S Dearborn Chgo 3 Ill
Universal Blower Co 1090 S Adams Av Birmingham Mich
Willis Steel Corp Box 149 Galesburg Ill

VENTILATORS—foundation

Air Rectifiers Inc 3734 N Southport Av Chicago 13 Ill
Croft Steel Products Inc 24 Market St Jamestown N Y
Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Krauser-Boyd Inc 553 River Rd N Tonawanda N Y
Leslie Welding Co 2940 W Carroll Av Chicago 12 Ill
Majestic Co 303-C Erie St Huntington Ind
Shepler Mfg Co 1312 Sheffield St Pittsburgh 33 Pa
Standard Steel Cabinet Co 3701 Milwaukee Av Chicago 41 Ill
Vestal Stove Co PO Box 152-A Sweetwater Tenn

VENTILATORS—roof, wall

Adams Co Dubuque Ia
Airmaster Corp 4317 Ravenswood Av Chicago 13 Ill
Air Rectifiers Inc 3734-AL N Southport Ave Chicago 13 Ill (wall only glass block)
Allen Steel Products Inc 12911 Hillview Av Detroit 27 Mich
American Sheet Metal Wks 331 N Alexander St New Orleans La
Badger Corrugating Co La Crosse Wis
Brower Mfg Co Box 251 Quincy Ill
Philip Carey Mfg Co Dept AL-4 Lockland Cincinnati 15 Ohio
Ceco Steel Products Corp 5601 W 26th St Chgo 50 Ill
Clay Equipment Co Cedar Falls Ia
Damp-Vent Co Box 203 Battendorf Ia
Diehl Mfg Co 1124 Fenderne Av Somerville N J
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Edwards Mfg Co 427 Culvert St Cincinnati 2 Ohio
Fasco Industries Inc 212 Augusta St Rochester 2 N Y
Franklin Equipment Co Monticello Ia
Gold Seal Mfg Co 1230 W Kinzie St Chicago 22 Ill
Harris Inc 200 E Long St Columbus 15 Ohio
A D Hemphill Co 129 S Franklin St Lake City Minn
Inland Steel Products Co (formerly Milcor Steel Co) 4207 W Burnham St Milwaukee 1 Wis
Johns-Manville Corp PO Box 290 22 E 40th St New York 16 NY
Krauser-Boyd Inc 553 River Rd N Tonawanda N Y
Leigh Building Products Div of Air Control Products Inc Coopersville Mich
Leslie Welding Co 2940 W Carroll Av Chicago 12 Ill
Louden Machinery Co Fairfield Ia
Metal Arts Mfg Co Inc PO Box 4144 Atlanta 2 Ga (roof only)
Pennsylvania Wire Glass Co Philadelphia 3 Pa
Penn Supply & Metal Corp 1831 N 5th St Philadelphia 22 Pa
N H Rudeen Co 2840 Fourth Ave South Minneapolis 8 Minn
St Paul Corrugating Co St Paul 1 Minn
Wm J Samcoe Iron Co 917 Military Rd Kenmore 17 N Y
Shepler Mfg Co 1312 Sheffield St Pittsburgh 33 Pa
F A Smith Mfg Co Inc Rochester N Y
Standard Steel Cabinet Co 3701 Milwaukee Av Chicago 41 Ill
Starline Inc Harvard Ill
Stewart Mfg Co 3205-7 E Washington St Indianapolis 1 Ind
Swartwout Co 18568 Euclid Av Cleveland 12 Ohio
Trane Co La Crosse Wis
Universal Blower Co 1090 S Adams Av Birmingham Mich
Vestal Stove Co Box 152-A Sweetwater Tenn
Wayne Agricultural Wks Inc Goldsboro N C
Willis Steel Corp Galesburg Ill

VENTILATORS—window

Airmaster Corp 4317 Ravenswood Av Chicago 13 Ill
Angel Novelty Co 340 Broad St Fitchburg Mass
American Blower Corp Detroit 32 Mich
Berns Mfg Co 3050 N Rockwell Chicago 18 Ill
Philip Carey Mfg Co Dept AL-4 Lockland Cincinnati 15 Ohio
Diehl Mfg Co 1124 Finderne Av Somerville N J (electric)
Emerson Electric Mfg Co 8100 Florissant Av St Louis 21 Mo (electric)
Farwell Ozmun Kirk & Co St Paul 1 Minn
Fasco Industries Inc 212 Augusta St Rochester 2 N Y
Gold Seal Mfg Co 1230 W Kinzie St Chicago 22 Ill
The Ideal Ventilator Co 160 Atlantic Av Providence 7 R I
Ilg Electric Ventilating Co 2850 N Pulaski Rd Chicago 41 Ill
Chas O Larson Co Sterling Ill
National Screen Co Inc Suffolk Va
Pennsylvania Wire Glass Co 1612 Market St Philadelphia 3 Pa
Phenix Mfg Co 4129 N Port Washington Rd Milwaukee 12 Wis
Plymouth Stamped Metal Co Galion O
Protective Ventilator Co 310 W 93 NY NY
Stewart Mfg Co 3205-7 E Washington St Indianapolis 1 Ind
O A Sutton Corp 1812 W 2nd St Wichita Kans
Wayne Mfg Co Detroit Mich

VERMICULITE

Acme Asbestos Covering & Flooring Co 246 N Elizabeth Chgo 7 Ill
F E Schundler & Co Inc 504 Railroad St Joliet Ill
Zonolite Company Dept AL-42 135 S La Salle St Chicago 3 Ill

VISES

Armstrong Bros Tool Co 5300 W Armstrong Av Chicago Ill
Armstrong Mfg Co 333 Knowlton St Bridgeport 8 Conn
The Billings & Spencer Co Hartford 1 Conn (pipe)
Desmond-Stephan Mfg Co Urbana Ohio
Grand Specialties Co 3101 W Grand Av Chgo Ill
Littlestown Hdwe & Foundry Co Littlestown Pa
Millers Falls Co Greenfield Mass
North Bros Mfg Co Philadelphia Pa
Northern Industries Inc 310 N Water St Milwaukee 2 Wis
Peck Stow & Wilcox Co Southington Conn
Richards-Wilcox Mfg Co Aurora Ill (woodworkers)

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Sargent & Co Dept 3D 45 Water St New Haven 9 Conn
Stanley Tools Div of The Stanley Works 111 Elm St New Britain Conn

WAGON BOXES—farm

Electric Wheel Co Quincy Ill
The Hargrove Co 4th & NY Des Moines Ia

WAGONS—logging & lumber

Electric Wheel Co Quincy Ill
Knox Corp Thomson Ga
Lindsey Wagon Co Laurel Miss
Pointer-Willamette Co Portland 5 Ore
A Streich & Bros Co Oshkosh Wis
Wadsworth & Irwin Inc 123 NE Oregon St Portland 14 Ore

WALLBOARD—fiber insulating

Armstrong Cork Co 4704 Ocean Av Lancaster Pa
Celotex Corp 120 S LaSalle St Chgo 3 Ill
Fiddes-Moore & Co 4950 State Line Av Hammond Ind
Fir-Tex Porter Bldg Portland 4 Ore
Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Forest Fiber Prods Co Box 68 Dept B Forest Grove Ore
Homasote Co Dept 50-A Trenton N J
Insulite Div Minnesota & Ontario Paper Co 500 Baker Arcade Bldg Minneapolis 2 Minn
Johns-Manville Corp PO Box 290 22 E 40th New York 16 NY
Masonite Corp Dept AL-47 111 W Washington St Chicago 2 Ill
National Gypsum Co Buffalo 2 N Y
Plastergon Wallboard Co PO Box 40 Sta B Buffalo 7 N Y
Plywood & Door Mfg Corp 11 W 42nd St New York 13 N Y
Simpson Logging Co 1065 Stuart Bldg Seattle 1 Wash
Superior Wood Products Inc 14th Av West & Water Front Duluth 2 Minn
U S Gypsum Co 300 W Adams St Chicago 6 Ill
Upson Co Lockport NY
Wood Conversion Co First Natl Bank Bldg Dept 120-42 St Paul 1 Minn

WALLBOARD—gypsum

Celotex Corp 120 S LaSalle Chgo 3 Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa (plain & woodgrain finish)
Grand Rapids Plaster Co Grand Rapids 2 Mich
National Gypsum Co Buffalo 2 N Y
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
Schumacher Wall Board Corp South Gate Cal
U S Gypsum Co 300 W Adams Chgo 6 Ill

WALLBOARD—marble finish

Arborite Co Ltd c/o J A Davies & Co 314 Straight Av S E Grand Rapids Mich
East Coast Tilebord Corporation 41 Wyckoff Av Brooklyn 37 N Y
Gibbs Boardtile Corp 636 N Aberdeen Chicago 22 Ill
Marsh Wall Products Inc Sub of Masonite Corp Dept 441 Dover Ohio
Prestile Mfg Co 5850 W Ogden Av Chicago Ill
Williams Products Co Inc 6127 Cedar Av Philadelphia 43 Pa

WALLBOARD—tiled

A & F Tileboard Co Inc Box 4085 Alexandria La
Armstrong Cork Co 4704 Ross St Lancaster Pa
Barclay Mfg Co 385 Gerard Av Bronx NY
Cornell Wood Products Co 230 N Michigan Av Chgo 1 Ill
Davis Plywood Corp 12555 Berea Rd Cleveland 11 Ohio
East Coast Tilebord Corp 41-59 Wyckoff Ave Brooklyn 27 N Y
Gibbs Boardtile Corp 636 N Aberdeen Chicago 22 Ill
Insulite Div Minnesota & Ontario Paper Co 500 Baker Arcade Bldg Minneapolis 2 Minn
Johns-Manville Corp PO Box 290 22 E 40th New York 16 NY
Marsh Wall Products Inc Sub of Masonite Corp Dept 441 Dover Ohio
National Gypsum Co Buffalo 2 N Y
Plastergon Wallboard Co PO Box 40 Sta B Buffalo 7 N Y
Prestile Mfg Co 5850 W Ogden Av Chicago Ill
Roxdale Bldg Products Corp Dept L-452 2916-18 White Plains Rd N Y 67 N Y
Superior Wall Products Co 4401 N American St Philadelphia 40 Pa
Tylac Co Monticello Ill
Wallace Mfg Co 10th & Fayette Kansas City Mo (also leather finish)
Williams Products Co Inc 6127 Cedar Av Philadelphia 43 Pa
Wood Conversion Co Dept AL-42 First National Bank Building St Paul Minn
Yankee Fiber Tile Mfg Co 5035 Bellevue Av Detroit 11 Mich

WALLBOARD—woodgrain finish

Arborite Co Ltd c/o J A Davies & Co 314 Straight Av S E Grand Rapids Mich
Formica Insulation Co 4501 Spring Grove Av Cincinnati 32 Ohio
Gibbs Boardtile Corp 636 N Aberdeen Chgo Ill
Homasote Co Dept 50-A Trenton N J
Lustrewood Process Co Div Frederick Raff Co PO Box 724 Bristol Conn
Marsh Wall Products Inc Dept 441 Dover Ohio
National Gypsum Co Buffalo 2 N Y
Prestile Mfg Co 5850 W Ogden Chicago Ill
U S Gypsum Co 300 W Adams Chgo 6 Ill

WALL COPING

Cannelton Sewer Pipe Co Inc Cannelton Ind
Clay City Pipe Co Uhrichsville Ohio
Denver Sewer Pipe & Clay Co Denver 1 Colo
Evans Pipe Co Uhrichsville Ohio
Lehigh Sewer Pipe & Tile Co Ft Dodge Ia
Owensboro Sewer Pipe Co Inc Owensboro Ky
Robinson Clay Prod Co Akron O
Sealcon Products Inc Minneapolis 3 Minn
Stillwater Clay Products Inc 3334 Prospect Av Cleveland 15 Ohio
Streator Drain Tile Co Streator Ill
Washington Brick & Lime Co Box 2198 Spokane 6 Wash
What Cheer Clay Prod Co What Cheer Ia

WALL PLUGS

Allen Steel Products Inc 12911 Hillview Detroit 27 Mich
American Sheet Metal Works 331 N Alexander St New Orleans La
Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
F D Kees Mfg Co Beatrice Nebr
Merwin Mfg Co Erie Pa
Sommer Metalcraft Corp Crawfordsville Ind

WALL SIZE

American Varnish Co 1138 N North Branch Chgo 22 Ill
Armstrong Cork Co 4704 Ocean Av Lancaster Pa
The Borden Co Chemical Div 350 Madison Av NY 17 NY
Cleveland Cleaner & Paste Co Cleveland 2 Ohio
Consumers Glue Co St Louis 6 Mo
Crescent Products Co 315 N 14th St Terre Haute Ind
Devoe & Raynolds Co Inc 787 1st Av New York 17 N Y
Elliott Paint & Varnish Co 4525 W 5th Av Chgo 24 Ill
Empire Varnish Co 2636 E 76th St Cleveland 4 Ohio
Evans Pipe Co Uhrichsville Ohio
Excelsior Varnish Works Inc 1218 W 74th Street Cleveland 2 Ohio
Farwell Ozmun Kirk & Co St Paul 1 Minn
Le Page's Inc Gloucester Mass
G L Liebich Co 931 N Ogden Av Chicago 22 Ill
Monsanto Chemical Co Western Div 911 Western Av Seattle 4 Wash
Muralo Co Inc 572 Richmond Terrace Staten Island 1 N Y
Patent Cereals Co Geneva N Y
Pyramid Process Co Inc East Rochester N Y
Reardon Co St Louis Mo
Reliable Paste Co 3560 Shields Av Chgo 9 Ill
Standard Industrial Products Inc Box 325 Evansville 4 Ind
Truscon Laboratories Detroit Mich
U S Gypsum Co 300 W Adams Chicago 6 Ill
Vita-Var Corp 1180 Raymond Blvd Newark 2 N J
Wesco Waterpaints Inc 5th & Grayson Sts Berkeley 10 Calif

WALLPAPER

The Birge Co Inc 390 Niagara St. Buffalo 1 NY
Buffalo Wallcraft Co Inc P O Box 54 Station B Buffalo 7 N Y
Century Wallpaper Mills Decatur Ill
Devoe & Raynolds Co Inc 787 1st Av New York 17 N Y
Imperial Paper & Color Corp Glens Falls NY
Lennon Wallpaper Co Joliet Ill
Plattsburgh Wallpaper Co Plattsburgh N Y
Prager Co Worcester Mass
Saginaw Salt Products Co Saginaw Mich
Stamford Wallpaper Co Stamford Conn
Standard Coated Products Div of Interchemical Corp 350 Fifth Av NY 1 NY
Star-Peerless Wallpaper Mills Joliet Ill.
Statter Wallpaper Mills Crystal Lake Ill
Trimz Co Inc Merchandise Mart Chgo Ill (ready pasted)
United Wallpaper Factories Inc 3330 Fillmore Chgo Ill

WALLPAPER DISPLAYERS

Multiplex Display Fixture Co 907-917 N 10th St St Louis Mo (swinging panel type)

WALLPAPER REMOVERS

Boyer Chemical Laboratory Co 2232 S Wabash Chicago 16 Ill
Devoe & Raynolds Co Inc 787 1st Av New York 17 N Y
Le Page's Inc Gloucester Mass
Patent Cereals Co Geneva N Y
Pyramid Process Co Inc East Rochester N Y
Reliable Paste Co 3560 Shields Av Chgo 9 Ill
N B Spurgeon Co 20 N Wacker Dr Chicago 6 Ill
Tamms Industries Inc 228 N La Salle St Chgo 1 Ill
United Gilsonite Laboratories Scranton 1 Pa
Warner Mfg Co Minneapolis 14 Minn (steam)

WAREHOUSING—field

Douglas-Guardian Warehouse Corp 118 N Front New Orleans 1 La
Lawrence Warehouse Co W P Story Bldg Los Angeles Calif
St Louis Terminal Warehouse Co St Louis Mo

WATERPROOFING—asphalt

Abesto Mfg Co Michigan City Ind
Barrett Div Allied Chemical & Dye Corp 40 Rector N Y 6 N Y
Bird & Son Inc Dept AL-4 East Walpole Mass
Camp Chemical Co Inc 2nd Av & 13th St Brooklyn N Y
Ceresit Waterproofing Corp 3227 S Shields Ave Chicago 16 Ill
Certain-teed Products Corp 120 E Lancaster Av Ardmore Pa
Coopers Creek Chemical Corp West Conshohocken Pa
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Fort Pitt Chemical Co 26th & Smaliman Sts Pittsburgh 22 Pa
The Gibson-Homans Co 2367 Woodhill Rd Cleveland Ohio
Glidden Co Cleveland Ohio
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
Johns-Manville Corp PO Box 290 22 E 40th New York 16 NY
Keystone Asphalt Products Co 101 E Ontario St Chicago 11 Ill
Lastik Products Co Inc Pittsburgh 22 Pa
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
Pecora Paint Co American & Venango Philadelphia 40 Pa
Pittsburgh Plate Glass Co P O Box 551 Pittsburgh 22 Pa
Presstite Egineering Co 3900 Chouteau Av St Louis 10 Mo
Protective Papers Inc Union Ill

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

The Ruberoid Co 500 Fifth Av N Y 18 N Y
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
The Texas Co 135 E 42nd St New York 17 N Y
W F Webster Cement Co 224 Thorndike St Cambridge 41 Mass

WATERPROOFING—*Integral*

Adensite Co Inc 37-19 23rd St Long Island City N Y
American Fluresit Co Inc 4011 Red Bank Rd Cincinnati 27 Ohio
Anti Hydro Waterproofing Co 265 Badger Av Newark 8 N J
Ceresit Waterproofing Corp 3227 S Shields Chicago Ill
Dow Chemical Co Midland Mich
Etling Window Dept AL Barberton O
Fort Pitt Chem Co 26th & Smallman St Pittsburgh 22 Pa
Harrop Chemical Co 135 Hoboken Av Jersey City 2 N J
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
Medusa Portland Cement Co 1000 Midland Bldg Cleveland 15 Ohio
Ohio Hydrate & Supply Co Woodville O
Pittsburgh Plate Glass Co P O Box 551 Pittsburgh 22 Pa
Ranetite Mfg Co 1917 S Broadway St. Louis Mo
Rubber & Plastics Compound Co Inc 30 Rockefeller Plaza New York 20 N Y
Sealcon Prod Inc 927 Second Av S Minneapolis 2 Minn
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Standard Dry Wall Products Inc PO Box X New Eagle Pa
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill
Toch Bros Inc 2600 Richmond Terr Staten Insland 3 N Y
Truscon Lab Inc Detroit Mich
Wayne Chemical Products Co Copeland & MCRR Detroit 17 Mich

WATERPROOFING—*liquid*

Abesto Mfg Corp Dept D3 Michigan City Ind
American Fluresit Co Inc 4011 Red Bank Rd Cincinnati 27 Ohio
Anti Hydro Waterproofing Co 265 Badger Av Newark 8 N J
Barrett Div Allied Chemical & Dye Corp 40 Rector N Y 6 N Y
Breinig Bros Inc Hoboken N J
Samuel Cabot Inc 420 Oliver Bldg Boston 9 Mass
Calbar Paint & Varnish Co 2612-26 N Martha St Philadelphia 25 Pa
Camp Chemical Co Inc 2nd Av & 18th St Brooklyn N Y
Philip Carey Mfg Co Dept AL-4 Cincinnati 15 Ohio
Ceraseal Chemical Corp 2216 South St Lafayette Ind
Ceresit Waterproofing Corp 3227 S Shields Chicago Ill
Coopers Creek Chemical Corp West Conshohocken Pa
Etling Window Dept AL Barberton O
Forman Ford & Co 111 S 2nd St Minneapolis 1 Minn
Harrop Chemical Co 135 Hoboken Av Jersey City 2 N J
Haynes Products Co 4007 Farnam St Omaha 3 Nebr
A C Horn Co Inc 10th St & 44th Av Long Island City N Y
Nelsonite Chemical Products Inc 226 Scribner Ave N W Grand Rapids 2 Mich
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Penn Crete Products Co 20th & Lippincott Sts Philadelphia 32 Pa
Pittsburgh Plate Glass Co P O Box 551 Pittsburgh 22 Pa
Prima Products Inc 10 E 40th St New York 16 N Y
Protection Products Mfg Co Kalamazoo Mich
Ranetite Mfg Co 1917 S. Broadway St Louis Mo
Rubber & Plastics Compound Co Inc 30 Rockefeller Plaza New York 20 N Y
Sealcon Products Inc Minneapolis 2 Minn
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Standard Dry Wall Products Inc PO Box X New Eagle Pa
Tamms Industries Inc 228 N LaSalle Chgo 1 Ill
Toch Bros Inc 2600 Richmond Terr Staten Insland 3 N Y
Truscon Labs Detroit Mich
Tuff-Kote Co St Charles Ill
United Gilsonite Labs Scranton 1 Pa
Vita-Var Corp 1180 Raymond Blvd Newark 2 N J
Waterlox Div Empire Varnish Co 2636 E 76th St Cleveland O
Waxed Silicone Products Inc 5028 N W 7th Ave Miami 37 Fla
Wurdack Chemical Co 4977 Fyler Av St Louis 9 Mo

WATERPROOFING—*membrane*

Barrett Div Allied Chemical & Dye Corp 40 Rector N Y 6 N Y
Samuel Cabot Inc Rm 420 Oliver Bldg Boston 9 Mass
Philip Cary Mfg Co Dept AL-4 Cincinnati 15 Ohio
The Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
Johns-Manville Corp Box 290 22 E 40th St NY 16 NY
Kay-Tite Co West Orange N J
Minwax Co Inc 11 W 42nd NY NY
Nukem Products Corp 111 Colgate Av Buffalo N Y
Owens-Corning Fiberglas Corp Dept 64-D2 Nicholas Bldg Toledo 1 Ohio
Pittsburgh Plate Glass Co P O Box 551 Pittsburgh 22 Pa
Presstite Engineering 3900 Chouteau Av St Louis 10 Mo
Ranetite Mfg Co Inc St Louis Mo
Rubber & Plastics Compound Co Inc 30 Rockefeller Plaza New York 20 N Y
Ruberoid Co 500 Fifth Ave New York 18 N Y
Sealcon Products Inc Minneapolis 2 Minn
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Tamms Industries Inc 228 N LaSalle Chicago Ill
The Texas Co 135 E 42nd St New York 17 N Y
Vita-Var Corp 1180 Raymond Blvd Newark 2 N J
Wasco Flashing Co Cambridge Mass

WATERPROOFING—*metallic*

Belmont Smelting & Refining Works Inc 330 Belmont Av Brooklyn 7 N Y
Ceresit Waterproofing Corp 3227 S Shields Chicago Ill
Chase Brass & Copper Co 236 Grand St Waterbury 20 Conn
Etling Window Dept AL Barberton O
Evercrete Corp 424 W 42nd St NY NY
The Gibson-Homans Co 2367 Woodhill Rd Cleveland Ohio
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
Ranetite Mfg Co Inc 1917 S Broadway St. Louis Mo
The Richkraft Co 228 N La Salle St Chicago 1 Ill
Sealcon Prod Inc 927 Second Av S Minneapolis 2 Minn
Sisalkraft Co Dept AL-4 205 W Wacker Dr Chicago 6 Ill
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Steelcote Mfg Co 3418 Gratios St Louis 3 Mo
Tamms Industries Inc 228 N La Salle Chgo 1 Ill
Truscon Labs Detroit Mich

WATERPROOFING—*transparent*

Adensite Co Inc 37-19 23rd St Long Island City N Y
American Fluresit Co Inc 4011 Red Bank Rd Cincinnati 27 Ohio
American Sta-Dri Co Brentwood Md
Anti-Hydro Waterproofing Co 265 Badger Av Newark 8 N J
Samuel Cabot Inc 420 Oliver Bldg Boston 9 Mass
Ceraseal Chemical Corp 2216 South St Lafayette Ind
Ceresit Waterproofing Corp 3227 S Shields Chicago Ill
Coopers Creek Chemical Corp West Conshohocken Pa
Etling Window Dept AL Barberton O
Forman Ford & Co 111 S 2nd St Minneapolis 1 Minn
The Gibson-Homans Co 2367 Woodhill Rd Cleveland Ohio
Gordon Chemical Co Inc 1100 Hickory St Kansas City 7 Mo
Haynes Products Co 4007 Farnam St Omaha 3 Nebr
A C Horn Co Inc 10th St & 44th Av Long Island City N Y
Hydrochem Co 3540 Norton Rd Cleveland 11 Ohio
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Prima Products Inc 10 E 40th St New York 16 N Y
Protection Products Mfg Co Kalamazoo 99 Mich
Ranetite Mfg Co 1917 Broadway St Louis Mo
Sealcon Prod Inc 927 Second Av S Minneapolis 2 Minn
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Standard Dry Wall Products Inc PO Box X New Eagle Pa
Tamms Industries Inc 228 N LaSalle Chicago 1 Ill
Toch Bros Inc 2600 Richmond Terr Staten Island 3 N Y
Truscon Labs Detroit Mich
Vita-Var Corp 1180 Raymond Blvd Newark N J
Waterlox Div Empire Varnish Co 2636 E 76th St Cleveland Ohio
Waxed Silicone Products Inc 5028 N W 7th Ave Miami 37 Fla
Wurdack Chemical Co 4977 Fyler Ave St Louis 9 Mo
X-Pando Corp 43-15 36th St Long Island City 1 N Y

WATERPROOFING COMPOUNDS *basement, cistern*

Abesto Mfg Corp Dept D3 Michigan City Ind
Adensite Co Inc 37-19 23rd St Long Island City N Y
American Fluresit Co Inc 4011 Red Bank Rd Cincinnati 27 Ohio
American Sta-Dri Co Brentwood Md
Anti Hydro Waterproofing Co 265 Badger Av Newark 8 N J
Barrett Div Allied Chemical & Dye Corp 40 Rector St New York 6 N Y
Samuel Cabot Inc 420 Oliver Bldg Boston 9 Mass
Camp Chemical Co Inc 2nd Av & 18th St Brooklyn N Y
Philip Carey Mfg Co Dept AL-4 Lockland Cincinnati 15 Ohio
Ceresit Waterproofing Corp 3227 S Shields Chicago Ill
Continental Asbestos & Refining Corp 1 Madison Av New York 10 N Y
Coopers Creek Chemical Corp West Conshohocken Pa
Coprox Inc 1270 6th Av New York 20 N Y
Donley Bros 13928 Miles Av Cleveland 5 Ohio
Etling Window Dept AL Barberton O
The Flintkote Co Inc 30 Rockefeller Plaza NY 20 NY
Forman Ford & Co 111 S 2nd St Minneapolis 1 Minn
Gordon Chemical Co Inc 1100 Hickory St Kansas City 7 Mo
Haynes Products Co 4007 Farnam St Omaha 3 Neb
A C Horn Co Inc 10th St & 44th Av Long Island City 1 N Y
International Aquella Products Inc Rockefeller Center New York N Y
Kay-Tite Co West Orange N J
Pecora Paint Co Inc American & Venango Sts Philadelphia 40 Pa
Penn Crete Products Co 20th & Lippincott Sts Philadelphia 32 Pa
Pittsburgh Plate Glass Co P O Box 551 Pittsburgh 22 Pa
Prima Products Inc 10 E 40th St New York 16 NY
Protection Products Mfg Co Kalamazoo 99 Mich
Ranetite Mfg Co 1917 S Broadway St Louis Mo
Rubber & Plastics Compound Co Inc 30 Rockefeller Plaza New York 20 N Y
Smooth-On Mfg Co 572 Communipaw Av Jersey City 4 N J
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Standard Dry Wall Products Inc PO Box X New Eagle Pa
Tamms Industries Inc 228 North LaSalle St Chicago 1 Ill
Truscon Labs Detroit Mich
Waterlox Div Empire Varnish Co 2636 E 76th St Cleveland O
X-Pando Corp 43-15 36th St Long Island City 1 N Y

WATER SYSTEMS

Aermotor Co 2500 W Roosevelt Rd Chicago 8 Ill
Aurora Pump Co 619 Loucks St Aurora Ill
Dayton Pump & Mfg Co 500 N Webster St Dayton 1 Ohio
Delco Appliance Div General Motor Sales Corp Rochester N Y

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

The Deming Co Salem Ohio
Fairbanks Morse & Co 600 S Michigan Av Chgo Ill
Flint & Walling Mfg Co Inc Kendallville Ind
Goulds Pumps Inc Seneca Falls N Y
Lancaster Pump & Mfg Co Inc 118 W Chestnut St Lancaster Pa
A Y McDonald Mfg Co Dubuque Iowa
F E Myers & Bro Co Ashland O
Pomona Pump Co Pomona Calif

WAX—floor

Acme Quality Paints Inc Detroit 11 Mich
Acorn Refining Co 8001 Franklin Blvd Cleveland O
Armstrong Cork Co 4704 Ocean Av Lancaster Pa
Boston Varnish Co Boston 49 Mass
Boyle-Midway Inc 22 E 40th St New York 16 N Y
E L Bruce Co PO Box 397 Menphis Tenn
Clarke Sanding Machine Co 464 Clay St Muskegon Mich
Devoe & Raynolds Co Inc 787 1st Av New York 17 N Y
E I du Pont de Nemours & Co Inc Wilmington 98 Del
Forman Ford & Co 111 S 2nd St Minneapolis 1 Minn
Franklin Research Co Philadelphia Pa
John H Graham & Co 105 Duane St New York 8 N Y
Hilger Co St Cloud Minn
A C Horn Co 43-36 Tenth Long Island City 1 N Y
Hydrochem Co 3540 Norton Rd Cleveland 11 Ohio
International Chemical Co 3140 S Canal St Chicago 16 Ill
Lowe Bros Co Dayton Ohio
Minwax Co Inc 11 W 42nd NY NY
Minnesota Platon Corp Pipestone Minn
O-Cedar Corp 2246 W 49 Chgo Ill
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
Pratt & Lambert Inc 75 Tonawanda Buffalo 7 NY
The Sargent-Gerke Co Indianapolis 6 Ind
The Savogran Co 25 Huntington Av Boston 16 Mass
Seidlitz Paint & Varnish Co 18th & Garfield Sts Kansas City Mo
Walter E Selck & Co 225 W Hubbard St Chicago 10 Ill
Socony-Vacuum Oil Co Inc 26 Broadway NY NY
L Sonneborn Sons Inc 80 Eighth Av New York 11 N Y
Geo D Wetherill & Co 113 Arch St Philadelphia 6 Pa
Williams Products Co Inc 6127-37 Cedar Ave Philadelphia 43 Pa

WAX REMOVER—floor

Cellowax Co 2114 N Charles St Baltimore Md
Chemical Supply Co 225 Plymouth Bldg Cleveland 15 Ohio
Devoe & Raynolds Co Inc 787 1st Av New York 17 N Y
Hydrochem Co 3540 Norton Rd Cleveland 11 Ohio
Pabco Products Inc 475 Brannan St San Francisco 19 Cal
Puritan Chemical Co Atlanta 3 Ga
The Savogran Co 25 Huntington Av Boston 16 Mass
Schalk Chemical Co 351 E Second St Los Angeles 12 Cal
Tamms Industries Inc 228 N LaSalle St Chicago 1 Ill
Vita-Var Corp 1180 Raymond Blvd Newark N J

WEATHERSTRIP

Accurate Metal Weatherstrip Co Inc 218 E 26th NY 10 NY
Allmetal Weatherstrip Co 2243 N Knox Av Chicago 39 Ill (metal)
American Metal Weather Strip Co Grand Rapids Mich
Robert N Baltz & Co 1009 Harvard Terrace Evanston 6 Ill
Bridgeport Fabrics Inc 165 Holland Ave Bridgeport 1 Conn
Ceco Steel Products Corp 5601 W 26th St Chgo 50 Ill
Defiance Metal Weatherstrip Co 109 W Water St Oak Harbor O
W J Dennis & Co 4444 W Irving Park Chgo Ill
Dorbin Metal Strip Mfg Co 2408 S Cicero Av Chicago 50 Ill
Durkee-Atwood Co 215 7th St NE Minneapolis 13 Minn
Glaziers' Tool Mfg Corp 611 W Adams Chicago 6 Ill
The Handyman Co Minneapolis 3 Minn (French windows)
Karjam's Inc 495 Hempstead Turnpike W Hempstead L I N Y
Macklanburg-Duncan Co Oklahoma City 1 Okla
Master Metal Strip Service Inc 1720 N Kilbourn Av Chgo Ill
Milwaukee Strip Service Inc 4621-23 W Lisbon Ave Milwaukee 8 Wis
Monarch Metal Weatherstrip Corp St Louis 14 Mo
Protex Weatherstrip Mfg Co 4508 S Western Chicago Ill
Samson Products Co 3219 Armitage Av Chicago 47 Ill
Security Co 385 Midland Detroit 3 Mich
Southern Metal Products Corp 921 Rayner St Memphis Tenn
Weatherproof Products Corp P O Box 8498 Waldo Station Kansas City 5 Mo
Zegers Inc 8088 South Chicago Av Chgo 17 Ill

WEATHERSTRIP—door bottom

Accurate Metal Weatherstrip Co Inc 218 E 26th NY 10 NY
Robert N. Baltz & Co 1009 Harvard Terrace Evanston 6 Ill
Ceco Steel Products Corp 5601 W 26th St Chgo 50 Ill
W J Dennis & Co 4444 W Irving Park Chicago 39 Ill
Dorbin Metal Strip Mfg Co 2408 S Cicero Av Chicago 50 Ill
The Handyman Co Minneapolis 3 Minn
Karjam's Inc 495 Hempstead Turnpike W Hempstead L I N Y
Macklanburg-Duncan Co Oklahoma City 1 Okla
Master Metal Strip Service Inc 1720 N Kilbourn Av Chicago 39 Ill
Protex Weatherstrip & Mfg Co 4508 S Western Av Chicago 9 Ill
Sentry Stop-A-Draft Co 20 N Wacker Dr Chicago 6 Ill
Southern Metal Products Corp 921 Rayner St Memphis Tenn
United Products Co 900 N 43rd St Milwaukee 14 Wis
Weatherproof Products Corp P O Box 8498 Waldo Station Kansas City 5 Mo
Zegers Inc 8088 South Chicago Av Chgo 17 Ill

WEATHER VANES

Burkett Lightening Rod Co Fremont Ohio
Electra Protection Co Inc 11 N Pearl St Albany 7 N Y
J W Fiske Iron Works 78 Park Place New York 7 N Y
Independent Protection Co Inc Goshen Ind (ornamental)
Starline Inc Harvard Ill

WEDGES—ax, hammer, logging

Black Panther Tool Co 401 N Broad St Philadelphia 8 Pa
Mall Tool Co 7733 South Chicago Av Chicago 19 Ill (logging only)
Michigan Wedge Co Sturgis Mich
Red Devil Tools Irvington 11 N J
Stanley Tools Div of The Stanley Works 111 Elm St New Britain Conn

WHEELBARROWS

American Steel Scraper & Wheelbarrow Co Sidney Ohio
Buch Mfg Co Elizabethtown Pa
Chattanooga Wheelbarrow Co 1311 E Main St Chattanooga 2 Tenn
Essick Mfg Co 1950 Santa Fe Av Los Angeles 21 Cal
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Lansing Co Lansing Mich
Newark Ladder & Bracket Co Inc Clark (Rahway) N J
Novo Engine Co Lansing 5 Mich (mechanized)
Sterling Wheelbarrow Co Milwaukee Wis
Toledo Wheelbarrow Co Toledo Ohio
Western Wheel Barrow Mfg Co South Fort Smith Ark

WHEEL GUARDS

Adams Co Dubuque Ia
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Hawkins Iron Co Inc 319 N Fourth St Birmingham 4 Ala
International Steel Co Evansville 7 In
Majestic Co 303-C Erie St Huntington Ind
Metal Crafters 1756 E Av N E Cedar Rapids Iowa
Western Foundry Co Portland 1 Ore
Wheeling Corrugating Co Wheeling W Va

WINCHES—tractor & truck

American Hoist & Derrick Co 63 S Robert St St Paul Minn
Hyster Co 2979 NE Clackamas Portland 8 Ore & Peoria 1 Ill
R G LeTourneau Inc 2301 N Adams St Peoria Ill
David Round & Son Cleveland 5 Ohio
Shepard Niles Crane & Hoist Corp Montour Falls N Y
Silent Hoist & Crane Co 860 63rd Brooklyn 20 N Y
Stimmel Winch Co 37-24 33rd St Long Island City 1 N Y
Gar Wood Industries Inc Wayne Div Wayne Mich

WINDMILLS

Aermotor Co 2500 Roosevelt Rd Chicago 8 Ill
Baker Mfg Co Evansville Wis
Dempster Mill Mfg Co Beatrice Neb
Fairbanks Morse & Co 600 S Michigan Av Chgo Ill
Flint & Walling Mfg Co Inc Kendallville Ind
New England Tank & Tower Co Everett Mass
Stover Mfg & Engine Co Freeport Ill

WINDOW FRAMES—wood

Andersen Corp Bayport Minn
American Sash & Door Co Kansas City 1 Mo
Bel-Wood Mfg Co Ackerman Miss
Biles-Coleman Lbr Co Inc Omak Wash
Bradley Miller & Co Bay City Mich
Brown-Graves Co 191 E Miller Av Dept AL-103 Akron 1 Ohio
Burke Millwork Co Inc 3201 Fremont Av Seattle 3 Wash
Carr Adams & Collier Co Dubuque Ia
Cole Mfg Co P O Box 2657 Memphis 2 Tenn
Compo-Miracle Products Co Dept 1-12 15221 W 11 Mi Rd Berkley Mich
Curtis Cos Inc Clinton Ia
Farley & Loetscher Mfg Co Dubuque Ia
Huttig Mfg Co Box AL Muscatine Iowa
Huttig Sash & Door Co 1206 S Vandeventer Av St Louis 10 Mo
Keystone Frame & Mfg Co Spokane 3 Wash
Kinzua Pine Mills Co Kinzua Ore
Long-Bell Lumber Co R A Long Bldg Kansas City 6 Mo & Longview Wash
Malta Mfg Co Malta Ohio
Marquart Millwork Co Oshkosh Wis
Missoula White Pine Sash Co Missoula Mont
Morgan Sash & Door Co 2287 S Blue Island Av Chicago 8 Ill
Pacific Mutual Door Co Tacoma 2 Wash
Roach & Musser Co Muscatine Ia
Rock Island Millwork Co Rock Island Ill
Segelke & Kohlhaus Co La Crosse Wis
Seneca Lumber & Millwork Co 635-701 W Tiffin St Fostoria Ohio
Geo Silbernagel & Sons Co Wausau Wis
Spokane Pine Prod Co Spokane Wash
Western Pine Mfg Co Ltd P O Box 2207 Spokane 7 Wash
Weyerhaeuser Sales Corp St Paul Minn
White Pine Sash Co Spokane Wash
Winter Bros Lbr Products Inc 212 S Marion St Oak Park Ill

WINDOW GUARDS

Adams Co Dubuque Ia
Artcraft Ornamental Iron Co 724 E Hudson Columbus O
R G Coffman Co Inc 2809 N Orange Ave Orlando Fla
Cyclone Fence Div American Steel & Wire Co U S Steel Corp Sub P O Box 260 Waukegan 1 Ill
Davis & Siehl Co 4032 Hamilton Av Cincinnati 23 Ohio
Edwards Mfg Co 427 Culvert St Cincinnati 2 Ohio
Grand Rapids Wire Prod Co Grand Rapids Mich
Hawkins Iron Co Inc 319 N 4th St Birmingham 4 Ala
Haven-Bush Co 501 Front Av N W Grand Rapids 4 Mich
Kentucky Metal Products Co Preston St & Aubudon Pk Louisville 4 Ky
Leigh Building Products Div of Air Control Products Inc Coopersville Mich

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Logan Co Inc Louisville 6 Ky
Macklanburg-Duncan Co Oklahoma City 1 Okla
Natl Brass Co Grand Rapids Mich
Ney Mfg Co Canton O
Southern Wire & Iron Wks 441 Memorial Dr S E Atlanta Ga
Stewart Iron Wks Co Inc 1951 Stewart Block Cincinnati Ohio
Wheeling Corrugating Co Wheeling W Va

WINDOWS—aluminum

A B C Steel Equipment Co Inc 205 E 22nd St NY 10 NY
Alcasco Products Inc 1780 Creston Cor E Laketon Muskegon Mich
Aluminum Window Manufacturers Assn 74 Trinity Place New York 6 N Y
Compo-Miracle Products Co Dept 1-12 15221 W 11 Mi Rd Berkley Mich
Croft Steel Products Inc Sub Lundell-Eckberg Mfg Co Jamestown N Y
Cupples Co 401 S 7th St St Louis 2 Mo
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Fentron Steel Works Inc 2801 Market St Seattle 7 Wash
Flour City Ornamental Iron Co Minneapolis Minn
Michael Flynn Co 704 E Godfrey Av Philadelphia 24 Pa
General Bronze Corp Alwintite Div Dept AL-4 801 Stewart Av Garden City N Y
Harris Inc 200 E Long St Columbus 15 Ohio
Hollister Industries Inc 955 E Slouson Blvd Los Angeles Calif
Ingersoll Steel Div of Borg-Warner Corp 310 S Michigan Chicago 4 Ill
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Ludman Corp Dept 2Y Box 4541 Miami Fla
The Maco Corp Huntington Ind
Metal Arts Mfg Co PO Box 4144 Atlanta 2 Ga
Metal Products Corp Hardware Div "W" 807 N W 20th St Miami 37 Fla (storm)
Metal Window Service Co 4601 W 47th St Chicago 32 Ill
Pennsylvania Wire Glass Co Philadelphia 3 Pa
Reynolds Metals Co Building Products Section 2002 S 9th St Louisville 1 Ky (casement)
F C Russell Co 1100 Chester Av Dept 7-AL-42 Cleveland 1 Ohio
Sterling Window Inc 369 Lexington Av New York 17 N Y
Superior Window Co 5300 N W 37th Av Miami Fla
J S Thorn Co Philadelphia 32 Pa
Union Aluminum Co Sheffield Ala
Valley Metal Products Co Plainwell Mich
Ware Laboratories Inc 1827 Delaware Parkway Miami 35 Fla

WINDOWS—awning type, metal

Fawsco Mfg Div Falls Stamping & Welding Co 1701 Front St Cuyahoga Falls Ohio
Croft Steel Products Inc Sub Lundell-Eckberg Mfg Co Jamestown N Y
Decatur Iron & Steel Co Decatur Ala
Fenestra Building Products Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
General Bronze Corp Alwintite Div Dept AL-4 801 Stewart Ave Garden City N Y
Harris Ind 200 E Long St Columbus 15 Ohio
Leigh Building Products Div of Air Control Products Inc Coopersville Mich
Stewart Iron Wks Co 1951 Stewart Blk Cincinnati 1 Ohio
Superior Window Co 5300 N W 37th Av Miami Fla
Valley Metal Products Co Plainwell Mich

WINDOWS—awning type, wood

Gate City Sash & Door Co Ft Lauderdale Fla
Ludman Corp Dept 2Y Box 4541 Miami Fla
Super-Vent Co 905 W North Av Chicago 14 Ill

WINDOWS—barn, steel, aluminum

Aluminum Window Manufacturers Assn 74 Trinity Place New York 6 N Y
Ceco Steel Products Corp 5601 W 26th St Chgo 50 Ill
Clay Equipment Corp Cedar Falls Ia
Crittall Inc 1319 Lincoln Av Waukesha Wis
Croft Steel Products Inc 24 Market St Jamestown N Y
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Fenestra Building Products Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
Fentron Steel Works Inc 2801 Market St Seattle 7 Wash
Michael Flynn Mfg Co 704 E Godfrey Av Philadelphia 24 Pa
General Bronze Corp Alwintite Div Dept AL-4 801 Stewart Ave Garden City N Y
Hope's Windows Inc Jamestown N Y
H D Hudson Mfg Co 589 E Illinois St Chicago 11 Ill
James Mfg Co Fort Atkinson Wis
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Klauer Mfg Co Dubuque Iowa
Louden Machinery Co Fairfield Iowa
The Ney Mfg Co 948 High Av S W Canton 4 N Y
Olson Mfg Co Albert Lea Minn
Starline Inc Harvard Ill
Steelcraft Mfg Co 9017 Blue Ash Rd Rossmoyne Ohio
J S Thorn Co 20th & Allegheny Av Philadelphia 32 Pa
Truscon Steel Co Youngstown 1 Ohio
Vento Steel Products Inc 249 Colorado Av Buffalo 15 N Y

WINDOWS—combination

Allied Metal Fabricators Inc 168 Howard St New London Conn
Alumatic Corp of America 2081 S 56th St Milwaukee 14 Wis (aluminum)
Aluminum Window Manufacturers Assn 74 Trinity Place New York 6 N Y
Andersen Corp Bayport Minn
Angel Novelty Co Fitchburg Mass
A W Barnhart Co Port Chester N Y
Burke Millwork Co Inc 3201 Fremont Av Seattle 3 Wash
Carr Adams & Collier Co Dubuque Iowa
Ceco Steel Products Corp 5601 W 26th St Chgo 50 Ill
Clay Equipment Corp Cedar Falls Ia
Compo-Miracle Products Co Dept 1-12 15221 W 11 Mile Rd Berkley Mich
Curtis Companies Inc Clinton Ia
Eagle-Picher Co Dept AL-452 9107 W Ogden Av Brookfield Ill
Farley & Loetscher Mfg Co Dubuque Ia
Feather-Lite Mfg Co 8205 Lyndon Av Detroit Mich
Fenestra Building Products Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
General Bronze Corp Alwintite Div Dept AL-4 801 Stewart Ave Garden City N Y
General Woodcraft Co Inc PO Box 31 North Bergen N J
Gregg & Son 25 Crown St Nashua N H
A D Hemphill Co 129 S Franklin St Lake City Minn
Hope's Windows Inc Jamestown N Y
Huttig Mfg Co Muscatine Ia
Ingersoll Steel Div Borg Warner Corp 310 S Michigan Av Chgo 4 Ill
Kane Mfg Corp Kane Pa
Marquart Millwork Co Oshkosh Wis
Moore Sash Co PO Box 420 Scottsbluff Nebr
Phenix Mfg Co 4129 N Port Washington Rd Milwaukee 11 Wis
F W Prentice & Co Adrian Mich
F C Russell Co 1100 Chester Av Dept 7-AL-42 Cleveland 1 Ohio
F E Schumacher Co Hartville Ohio
Security Co—Security Sash & Screen Co 385 Midland Detroit 3 Mich
Self Storing Window Co Dept A 2613 Stevens Av Minneapolis Minn
Seneca Lumber & Millwork Co Fostoria Ohio
J S Thorn Co Philadelphia 32 Pa
Winter-Seal Corp — Hayes Wolverine Corp 14575 Meyers Rd & 8525 Livernois Detroit Mich

WINDOWS—double hung, steel

American Sheet Metal Wks 331 N Alexander St New Orleans La
General Bronze Corp Alwintite Div Dept AL-4 801 Stewart Av Garden City N Y
S H Pomeroy Co Inc 25 Bruckner Blvd New York 54 N Y
Potts-Farrington Co 1224 Cherry St Philadelphia 7 Pa
F C Russell Co Dept 7AL42 1100 Chester Av Cleveland 1 Ohio
J S Thorn Co Philadelphia 32 Pa
Truscon Steel Co Youngstown 1 Ohio

WINDOWS—double hung, wood

Andersen Corp Bayport Minn
Anson & Gilkey Co Merrill Wis
Buffelen Lumber & Mfg Co Tacoma Wash
Burke Millwork Co Inc 3201 Fremont Av Seattle 3 Wash
Carr Adams & Collier Co Dubuque Ia
Cole Mfg Co Memphis Tenn
Compo-Miracle Products Co Dept 1-12 15221 W 11 Mi Rd Berkley Mich
Curtis Companies Inc Clinton Ia
Farley & Loetscher Mfg Co Dubuque Ia
General Woodcraft Co Inc PO Box 31 North Bergen N J
Gregg & Son Nashua N H
Huttig Mfg Co Box AL Muscatine Iowa
Ideal Co Box 889 Waco Tex
Long-Bell Lbr Co R A Long Bldg Kansas City 6 Mo & Longview Wash
Malta Mfg Co Malta Ohio
Marquart Millwork Co Oshkosh Wis
Morgan Company Oshkosh Wis
Morgan Sash & Door Co 2287 S Blue Island Av Chicago 8 Ill
NSW Co 12930 Auburn Av Detroit 21 Mich
Northwest Door & Plywood Sales Tacoma 1 Wash
Pacific Mutual Door Co Tacoma 2 Wash
Ponderosa Pine Woodwork 38 S Dearborn Chicago 2 Ill
Pullum Window Corp 12950 Lyndon Av Detroit 27 Mich
J R Quigley Co Gloucester City N J
The Radford Co Oshkosh Wis
Roach & Musser Co Muscatine Ia
Rock Island Millwork Co Rock Island Ill
R O W Sales Co 1357 Academy Av Ferndale 20 Mich
Segelke & Kohlhaus Co La Crosse Wis
Geo Silbernagel & Sons Co Wausau Wis
Geo J Silbernagel 8 S Michigan Av Chicago 3 Ill
Western Pine Mfg Co P O Box 2207 Spokane Wash
Weyerhaeuser Sales Co St Paul Minn
White Pine Sash Co Spokane Wash

WINDOWS—picture

Andersen Corp Bayport Minn
Brown-Graves Co Akron 1 Ohio
Ceco Steel Products Corp 5601 W 26th St Chicago 50 Ill
Curtis Companies Inc Clinton Ia
General Bronze Corp Alwintite Div 801 Stewart Ave Garden City N Y
Michael Flynn Co 704 E Godfrey Ave Philadelphia 24 Pa
Malta Mfg Co Malta Ohio
Solar Air-Flo Inc Elkhart Ind

WINDOWS—pivoted & projected, steel, aluminum

Aluminum Window Manufacturers Assn 74 Trinity Place New York 6 N Y
William Bayley Co Springfield Ohio
Ceco Steel Products Corp 5601 W 26th St Chgo 50 Ill
Compo-Miracle Products Co Dept 1-12 15221 W 11 Mi Rd Berkley Mich
Copco Steel & Engineering Co 14035 Grand River Av Detroit 27 Mich
Crittall Inc Waukesha Wis
Croft Steel Products Inc 24 Market St Jamestown N Y
Decatur Iron & Steel Co Decatur Ala
Fenestra Building Products Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
Fentron Steel Works Inc 2801 Market St Seattle 7 Wash
Michael Flynn Mfg Co 704 E Godfrey Av Philadelphia 24 Pa
General Bronze Corp Alwintite Div Dept AL-4 801 Stewart Av Garden City N Y
Hope's Windows Inc Jamestown N Y
International Steel Co Evansville Ind
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Marquart Millwork Co Oshkosh Wis
Geo L Mesker Steel Corp Evansville 9 Ind
Michel & Pfeffer Iron Wks Inc 10th & Harrison Sts San Francisco 3 Cal
Republic Steel Corp Cleveland 1 Ohio
Soule Steel Co 1750 Army St San Francisco 24 Calif
Steelcraft Mfg Co 9017 Blue Ash Rd Rossmoyne O
J S Thorn Co Philadelphia 32 Pa
Truscon Steel Co Youngstown 1 O

WINDOWS—pivoted & projected, wood

Curtis Companies Clinton Ia
Goshen Sash & Door Co Goshen Ind
Hayman Window Co 4401 Race St Denver 16 Colo (removable)
Marquart Millwork Co Oshkosh Wis

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

WINDOWS—steel basement

Adams Co Dubuque Ia
Allen Steel Products Inc 12911 Hillview Detroit 27 Mich
Ceco Steel Products Co 5601 W 26th Chicago 50 Ill
Clay Equipment Corp Cedar Falls Ia
Copco Steel & Engineering Co 14035 Grand River Av Detroit 27 Mich
Crittall Inc Waukesha Wis
Croft Steel Products Inc Sub Lundell-Eckberg Mfg Co Jamestown N Y
Decatur Iron & Steel Co Decatur Ala
The Donley Bros Co 13928 Miles Av Cleveland 5 Ohio
Fenestra Building Products Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
Fentron Steel Works Inc 2801 Market St Seattle 7 Wash
Michael Flynn Mfg Co 704 E Godfrey Av Philadelphia 24 Pa
Fries & Son Covington Ky
Gabriel Steel Co Cat A-13700 Sherwood Detroit 12 Mich
Hope's Windows Inc Jamestown N Y
International Steel Co Evansville 7 Ind
Kewanee Mfg Co 452 Albur Av Kewanee Ill
New Monarch Machine & Stamping Co Des Moines Ia
Soule Steel Co PO Box 3510 Rincon Bldg San Francisco 19 Cal
Steelcraft Mfg Co 9017 Blue Ash Rd Rossmoyne Ohio
J S Thorn Co Philadelphia 32 Pa
Truscon Steel Co Youngstown 1 Ohio
U S Gypsum Co 300 W Adams Chicago 6 Ill
Vento Steel Products Co Inc 249 Colorado Av Buffalo 15 N Y

WINDOWS—steel casement

The Wm Bayley Co Springfield O
Ceco Steel Products Corp 5601 W 26th Chicago 50 Ill
Copco Steel & Engineering Co 14035 Grand River Av Detroit 27 Mich
Crittall Inc Waukesha Wis
Croft Steel Products Inc 24 Market St Jamestown N Y
Decatur Iron & Steel Co Decatur Ala
Fenestra Building Products Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
Fentron Steel Works Inc 2801 Market St Seattle 7 Wash
Michael Flynn Mfg Co 704 E Godfrey Av Philadelphia 24 Pa
General Bronze Corp Alwintite Div Dept AL-4 801 Stewart Av Garden City N Y (aluminum)
Hope's Windows Inc Jamestown N Y
International Steel Co Evansville 7 Ind
Mesker Bros Sales Div 4344 Geraldine St St Louis 2 Mo
Geo L Mesker Steel Corp Evansville Ind
Michel & Pfeffer Iron Wks Inc 10th & Harrison Sts San Francisco 3 Cal
Potts-Farrington Co 1224 Cherry St Philadelphia 7 Pa (aluminum)
Republic Steel Corp Cleveland 1 Ohio
F C Russell Co Dept 7AL42 1100 Chester Av Cleveland 1 Ohio
Soule Steel Co 1750 Army St San Francisco 24 Calif
Steelcraft Mfg Co 9017 Blue Ash Rd Rossmoyne Ohio
J S Thorn Co Philadelphia 32 Pa
Truscon Steel Co Youngstown 1 Ohio
Vento Steel Products Co Inc 249 Colorado Av Buffalo 15 N Y

WINDOWS—steel, storm

Adams Co Dubuque Ia
A W Barnhart Co Port Chester N Y
Croft Steel Products Inc Sub Lundell-Eckberg Mfg Co Jamestown N Y
Fenestra Building Products Dept AL-4 2269 E Grand Blvd Detroit 11 Mich
Hope's Windows Inc Jamestown N Y
Kane Mfg Corp Kane Pa
Kewanee Mfg Co 452 Albur Av Kewanee Ill
Mesker Bros Sales Div 4344 Geraldine St Louis 15 Mo
F C Russell Co 1100 Chester Av Dept 7-AL-42 Cleveland 1 Ohio
Steelcraft Mfg Co 9017 Blue Ash Rd Rossmoyne Ohio
J S Thorn Co 20th & Allegheny Av Philadelphia 32 Pa
Truscon Steel Co Youngstown 1 Ohio
Vento Steel Products Co Inc 250 Colorado Av Buffalo 15 N Y

WINDOWS—wood, barn

Cole Mfg Co PO Box 2657 Memphis 2 Tenn
Curtis Companies Inc Clinton Ia
Farley & Loetscher Mfg Co Dubuque Ia
Huttig Mfg Co Muscatine Ia
The Long-Bell Lbr Co R A Long Bldg Kansas City 6 Mo & Longview Wash
Marquart Millwork Co Oshkosh Wis
Morgan Co Oshkosh Wis
Northwest Door & Plywood Sales Tacoma 1 Wash
F W Prentice & Co Adrian Mich
Rock Island Millwork Co Rock Island Ill
Segelke & Kohlhaus Co La Crosse Wis
Geo Silbernagel & Sons Co Wausau Wis
George J Silbernagel 8 S Michigan Av Chgo 3 Ill
Western Pine Mfg Co Ltd P O Box 2207 Spokane 7 Wash
White Pine Sash Co Spokane 7 Wash

WINDOWS—wood basement

Andersen Corp Bayport Minn
Carr Adams & Collier Co Dubuque Ia
Cole Mfg Co P O Box 2657 Memphis 2 Tenn
Curtis Companies Inc Clinton Ia
Farley & Loetscher Mfg Co Dubuque Ia
Huttig Mfg Co Box AL Muscatine Ia
Huttig Sash & Door Co 1206 S Vandeventer Av St Louis 10 Mo
Kinzua Pine Mills Co Kinzua Ore
The Long-Bell Lbr Co R A Long Bldg Kansas City 6 Mo & Longview Wash
Long Lake Lbr Co Spokane Wash
Malta Mfg Co Malta Ohio
Marquart Millwork Co Oshkosh Wis
Morgan Company Oshkosh Wis
Northwest Door & Plywood Sales Tacoma 1 Wash
Pacific Mutual Door Co Tacoma 2 Wash
The Radford Co Oshkosh Wis
Rock Island Millwork Co Rock Island Ill
Segelke & Kohlhaus Co La Crosse Wis
George J Silbernagel 8 S Michigan Av Chgo 3 Ill
Western Pine Mfg Co Ltd P O Box 2207 Spokane 7 Wash

WINDOWS—wood casement

Andersen Corp Bayport Minn
Brown-Graves Co Dept AL-102 191 E Miller Av Akron 1 Ohio
Carr Adams & Collier Co Dubuque Ia
Cole Mfg Co P O Box 2657 Memphis 2 Tenn
Curtis Companies Inc Clinton Ia
Farley & Loetscher Mfg Co Dubuque Ia
Huttig Mfg Co Box AL Muscatine Ia
Ideal Co Box 889 Waco Tex
Kinzua Pine Mills Co Kinzua Ore
The Long-Bell Lbr Co R A Long Bldg Kansas City 6 Mo & Longview Wash
Malta Mfg Co Malta Ohio
Marquart Millwork Co Oshkosh Wis
Morgan Co Oshkosh Wis
Morgan Sash & Door Co 2287 S Blue Island Av Chicago 8 Ill
Northwest Door & Plywood Sales Tacoma 1 Wash
Pacific Mutual Door Co Tacoma 2 Wash
Pullum Window Corp 12950 Lyndon Av Detroit 27 Mich
The Radford Co Oshkosh Wis
Rock Island Millwork Co Rock Island Ill
Segelke & Kohlhaus Co La Crosse Wis
Geo Silgernagel & Sons Co Wausau Wis
George J Silbernagel 8 S Michigan Av Chgo 3 Ill
Western Pine Mfg Co Ltd P O Box 2207 Spokane 7 Wash

WINDOWS—wood, horizontal acting

Andersen Corp Bayport Minn
Anson & Gilkey Co Merrill Wis
Curtis Cos Clinton Ia
Kinzua Pine Mills Co Kinzua Ore
The Long-Bell Lbr Co R A Long Bldg Kansas City 6 Mo & Longview Wash
Northwest Door & Plywood Sales Tacoma 1 Wash
Geo Silbernagel & Sons Co Wausau Wis
Western Pine Mfg Co Ltd P O Box 2207 Spokane 7 Wash
White Pine Sash Co Spokane 7 Wash

WINDOWS—wood, storm

Angel Novelty Co 340 Broad St Fitchburg Mass
Brown-Graves Co Dept AL-102 191 E Miller Av Akron 1 Ohio
Burke Millwork Co Inc 3201 Fremont Av Seattle 3 Wash
Carr Adams & Collier Co Dubuque Ia
Cole Mfg Co Box 2657 Memphis 2 Tenn
Curtis Companies Inc Clinton Ia
Farley & Loetscher Mfg Co Dubuque Ia
Feather-Lite Mfg Co 8205 Lyndon Av Detroit Mich
A D Hemphill Co 129 S Franklin St Lake City Minn
Huttig Mfg Co Box AL Muscatine Ia
Kinzua Pine Mills Co Kinzua Ore
The Long-Bell Lbr Co R A Long Bldg Kansas City 6 Mo & Longview Wash
Marquart Millwork Co Oshkosh Wis
Missoula White Pine Sash Co Missoula Mont
Moore Sash Co PO Box 420 Scottsbluff Nebr
Morgan Co Oshkosh Wis
Phenix Mfg Co 4129 N Port Washington Rd Milwaukee 12 Wis
Pacific Mutual Door Co Tacoma 2 Wash
Rock Island Millwork Co Rock Island Ill
F E Schumacher Co Hartville Ohio
Seneca Lbr & Millwork Co Fostoria O
Geo Silbernagel & Sons Co Wausau Wis
George J Silbernagel 8 S Michigan Av Chgo 3 Ill
Western Pine Mfg Co Ltd P O Box 2207 Spokane 7 Wash
White Pine Sash Co Spokane 7 Wash

WIRE—barbed

American Steel & Wire Co Rockefeller Bldg 614 Superior Av N W Cleveland 13 Ohio
Bethlehem Steel Co Bethlehem Pa
Colorado Fuel & Iron Corp Denver 1 Colo
Columbia Steel Co Russ Bldg San Francisco 6 Cal
Continental Steel Corp Kokomo Ind
Copperweld Steel Co Glassport Pa
Jones & Laughlin Corp Pittsburgh Pa
Keystone Steel & Wire Co Peoria Ill
Nichols Wire & Aluminum Co Davenport Iowa (steel & aluminum)
Northwestern Steel & Wire Co Sterling Ill
Pittsburgh Steel Co Pittsburgh 30 Pa
Republic Steel Corp Cleveland 1 Ohio
Tennessee Coal Iron & R R Co U S Steel Corp Sub Birmingham 2 Ala
Wickwire Spencer Steel Div of the Colorado Fuel & Iron Corp 500 Fifth Av NY 18 NY

WIRE—galvanized steel

American Steel & Wire Co Rockefeller Bldg 614 Superior Av N W Cleveland 13 Ohio
Bethlehem Steel Co Bethlehem Pa
Century Fence Co Waukesha Wis
Colorado Fuel & Iron Corp Wickwire Spencer Steel Div 500 Fifth Av New York 18 N Y
Columbia Steel Co Russ Bldg San Francisco 6 Cal
Continental Steel Corp Kokomo Ind
Johnson Steel & Wire Co Inc PO Box 1211 Worcester 1 Mass
Jones & Laughlin Steel Corp Pittsburgh Pa
Nichols Wire & Aluminum Co Davenport Iowa (also aluminum)
Pittsburgh Steel Co Pittsburgh Pa
Republic Steel Corp Cleveland 1 Ohio
Seneca Wire & Mfg Co Fostoria O
Tennessee Coal Iron & R R Co U S
Youngstown Sheet & Tube Co Youngstown 1 Ohio

WIRE PULLERS & STRETCHERS

American Steel & Wire Co Rockefeller Blg 614 Av N W Cleveland 13 Ohio
Bethlehem Steel Co Bethlehem Pa
Louden Machine Co Fairfield Ia

WIRING—electric, home

Better Homes Bureau Westinghouse Electric Corp Dept AL-452 PO Box 868 Pittsburgh 30 Pa

WOOD—balsa

Balsa Ecuador Lbr Corp 500 Fifth Av New York 18 N Y
Georgia-Pacific Plywood Co Southern Finance Bldg Augusta Ga
Johnson & Carlson 848 W Eastman Chicago 22 Ill
F C Luthi & Co Balter Bldg New Orleans 12 La

WOOD—compregnated

Parkwood Corp 24 Water St Wakefield Mass

For Manufacturers' and Wholesalers' Product Data see Index starting on page 10

Northeastern Lumber, Specialties and Other Items

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	W—North. White Pine N—Norway Pine	Eastern Hemlock	Eastern Spruce	Ash	Basswood	Beech	Birch	Cherry	Maple	Oak	Y—Yard & Shed Stock S—Softwood Flooring	D—Dimension T—Softwood Timbers	S—Bevel Siding H—Hardwood Flooring	A—Air Dried Rgh. Dimension K—K.D. Rgh. Dimension	F—Finished Dimension S—Semi-Finished Dimension	H—Hardwood Timbers V—Vehicle & Wagon Stock	B—Box Shook C—Crating	Other
MAINE																				
Augusta Lbr. Co., Augusta	MW		W	X	X														B	P
J. G. Deering & Son, Biddeford	M		W	X	X							X								P
M. S. Hancock, Inc., Casco	M		WN	X								X								
Saco Lumber Co., Inc., Saco	M		WN	X	X	X	X		X					T				H		
Timberlands Inc., Dixfield	M		WN																	
MASSACHUSETTS																				
Atlantic Lbr. Co., Boston	MW	50				X	X	X	X	X	X	X						HV	C	0
Chaffee Bros. Co., Oxford	M		WN	X		X	X	X	X		X	X							BC	
Fessenden Companies, Inc., Townsend	M		W									X								
H. A. Stiles Co., Boston 14	M																			8
NEW HAMPSHIRE																				
Johnson Lbr. Co., Inc., Manchester	MW	15	W	X					X		X	X								
The Kennett Co., Conway	M		WN	X					X			X	Y	DT	S	AK	F			P
M. R. Langdell, Milford	M		W	X																
John R. Mathes & Son, Inc., Dover	M		WN	X										DT						
NEW YORK																				
Adirondack Core & Plug Co., Carthage	W		W	X	X	X	X	X	X	X	X	X		T						
The Blount Lbr. Co., Lacona	M					X		X	X	X	X				H					
H. M. Boober, Nedrow	MW					X	X	X	X	X	X	X	Y	DT	SH	AK	FS	H		P
Conifer Lumber Mills, Conifer	M		W	X	X		X	X	X	X	X		YS	T	H	AK	S	H		
Cotton & Hanlon, Odessa	MW	30	W	X	X	X	X	X	X	X	X	X	Y	D	H	AK	F	HV	C	MF
Geo. E. Cressy & Sons, Utica, N. Y.	MW		WN	X										DT	H	AK	F		BC	P
Cross, Austin & Ireland Lbr. Co., Brooklyn 6	W		WN			X	X	X	X	X	X	X	YS	DT	SH	A	F	H	C	0
Elliott Hardwood Co., Inc., Potsdam	M	5						X	X	X	X									
Fordom Forest Prods. Corp., New York 17																				MF
Greene Lbr. Co., Greene	M		W	X		X	X	X			X	X				A				P
R. T. Jones Lbr. Co., Inc., N. Tonawanda	MW	35	WN	X	X								YS	DT	S	A			BC	0
A. Mason & Sons, Inc., Peru	M		WN		X				X	X	X	X	YS	DT		AK	F			
J. H. Monteath Co., New York 51	MW			X		X	X	X	X	X	X	X	YS			AK				01
Oval Wood Dish Corp., Tupper Lake	M	25	W	X	X	X	X	X	X	X	X				H					
Plunkett-Webster Lbr. Co. Inc., New Rochelle	MW	15	W	X	X	X	X	X	X	X	X	X	Y	DT	SH	AK	FS	HV	BC	0
Warren Ross Lbr. Co., Falconer, N. Y.	MW	5	WN	X		X	X	X	X	X	X	X					FS	HV		1
Treat-Nantke Co. Inc., No. Tonawanda	M*	10	W		X								Y		S					Δ
Ernst Seidelmann, Woolworth Bldg., N. Y. 7	W																			
PENNSYLVANIA																				
Babcock Lbr. Co., Pittsburgh 19	MW	40	W	X			X	X	X		X	X	YS	DT	SH			H	BC	
Cooper-Smith Lbr. Co., Wilkes-Barre	MW	5		X		X	X	X	X	X	X	X		T		A				
Everett Hardwood Lbr. Co., Everett	MW	30	W	X	X	X	X	X	X	X	X	X	Y	DT	SH	AK		H	C	0
Fisher & Young, Titusville	MW	5	W	X		X	X	X		X	X	X	Y			A	F	H		P
Endeavor Lbr. Co., Endeavor	MW	5	W	X		X	X	X	X	X	X	X	Y	DT		A	F	H	C	*

*Custom Mfrs. O—Other Woods

P—Poles and Piling Δ—Mahogany

S—Wood Plugs, Boilers, Turnings, Knobs, Dowels, Dowel Pins

1—Importers of Foreign Woods 2—Also Poplar and Elm

3—Plywood and Veneer MF—Mahogany, Foreign Woods

Northeastern Lumber, Specialties and Other Items

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	W—North. White Pine N—Norway Pine	Eastern Hemlock	Eastern Spruce	Ash	Basswood	Beech	Birch	Cherry	Maple	Oak	Y—Yard & Shed Stock S—Softwood Flooring	D—Dimension T—Softwood Timbers	S—Bevel Siding H—Hardwood Flooring	A—Air Dried Rgh. Dimension K—K.D. Rgh. Dimension	F—Finished Dimension S—Semi-Finished Dimension	H—Hardwood Timbers V—Vehicle & Wagon Stock	B—Box Shook C—Crating	Other
PENNSYLVANIA—Continued																				
Wm. Schuette Co., Pittsburgh	W		W		X								YS	DT	SH				BC	O
Wistar, Underhill & Co., Philadelphia 2	W		W	X	X	X	X	X	X		X	X	YS	DT	SH					O
VERMONT																				
C. E. & F. O. Burt Co., Stowe	M		W	X	X				X		X									
Holden & Martin Lbr. Co., Inc., Brattleboro	M		W	X	X							X		T	H	A	F			
Parker & Stearns, Inc., Johnson	M			X	X		X	X	X		X				H					
Plant & Griffith Lbr. Co., Inc., Jonesville	MW		W	X	X		X	X	X		X	X	YS	DT	SH	A	F			
Ward Lbr. Co., Inc., Moretown	M		W	X	X			X	X		X			D	S					

O—Other Woods

Appalachian Hardwood Lumber, Specialties and Other Items

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	A—Ash B—Basswood	X—Beech B—Birch	C—Cherry Y—Chestnut	Z—Hickory H—Hard Maple	S—Soft Maple O—Red & White Oak	P—Poplar S—Sycamore	W—Walnut	A—A.D. Rough Dimension K—K.D. Rough Dimension	F—Finished Dimension S—Semi-Finished Dimension	G—Glued Up Dimension I—Interior Trim & Moulding	T—Thresholds, Treads, Risers W—Wall Paneling	C—Construction Beards T—Timbers	Vehicle & Wagon Stock	C—Crating Stock B—Bending Stock	Appalachian White Pine	S—Appalachian Spruce H—Appalachian Hemlock	P—Southern Pine H—Hardwood Flooring	Other
Atlanta Oak Flg. Co., Atlanta 1, Ga.	MW		AB	XB	CY	ZH	SO	PS	W	AK	FS	GI	TW	CT	X	C	X	H	H	O
Atlantic Lbr. Co., 88 Broad St., Boston	MW	50	AB	XB	CY	ZH	SO	PS	W					T	X	B	X		PH	
Babcock Lbr. Co., Pittsburgh 19	MW	40		XB	Y	H	O	PS		A	FS		T	CT		C	X	SH	PH	
L. N. Bagnal, P. O. Box 2896, Winston-Salem, N. C.	W		AB	XB	Y	ZH	SO	PS	W	AK	FS	GI				C			P	O
J. B. Belcher, Box 8, Bluefield, W. Va.	MW	15	AB	XB	CY	ZH	SO	P	W					T		B				
Bemis Hardwood Lbr. Co., Robbinsville, N. C.	M	10	AB	XB	CY	ZH	SO	P		AK								H		1Z
Bristol Door & Lbr. Corp., Bristol, Va.	M	6	AB	X	Y	H	SO	P				GI	T							
D. D. Brown, Elkins, W. Va.	MW		AB	XB	CY	ZH	SO	P	W	AK				CT	X	C	X	H	H	
Carr Lbr. Co., Pisgah Forest, N. C.	M	8			Y		SO	P				I					X		H	2
Cherry River Boom & Lbr. Co., Richwood, W. Va.	MW	25	AB	XB	CY	H	SO	P		AK	FS	GI	TW	CT						
Christian Lbr. Co., Monticello, Ky.	MW	12	AB	X		H	SO	PS	W					CT					P	
Conasauga River Lbr. Co., Conasauga, Tenn.	MW	16	AB	XB	C	ZH	SO	P		A	F			CT	X	C	X	H	P	4
F. C. Cook & Co., Baltimore 2, Md.	MW		AB	X	C	H	SO	P	W	AK	FS	GI	T	T					H	
M. E. Crisp Lbr. Co., Welch, W. Va.	M		AB	XB	CY	ZH	SO	P	W	A				CT						3
Elk River Coal & Lbr. Co., Swandale, W. Va.	M	7	AB	X		ZH	SO	P	W	A	S			T	X			H		3
Ely-Thomas Lbr. Co., Camden-on-Gauley, W. Va.	M	12	AB	XB	C	ZH	SO	PS	W					CT				H		
English Lumber Co., Asheville, N. C.	MW										S	GI	TW				X			
M. B. Farrin Lbr. Co., Cincinnati, O.	MW	25	AB	XB	CY	ZH	SO	PS			FS	GI	TW	T	X	C	X	H	H	
Gennett Lbr. Co., Asheville, N. C.	M	18	AB	XB	CY	H	SO	P	W						X		X	H	H	
Georgia-Pacific Plywood Co., Augusta	MW	250	AB	XB	CY	ZH	SO	PS	W	AK			W	CT	X	C		H	PH	

1—Black Gum and Buckeye
2—Plastering Lath
3—Black Gum
Z—Butternut
O—Red & Sap Gum, Mahogany and Soft-woods
4—Also jobbers of West Coast Products

Appalachian Hardwood Lumber, Specialties and Other Items

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	A—Ash B—Basswood	X—Beech B—Birch	C—Cherry Y—Chestnut	Z—Hickory H—Hard Maple	S—Soft Maple O—Red & White Oak	P—Poplar S—Sycamore	W—Walnut	A—A.D. Rough Dimension K—K.D. Rough Dimension	F—Finished Dimension S—Semi-Finished Dimension	G—Glued Up Dimension I—Interior Trim & Moulding	T—Thresholds, Treads, Risers W—Wall Paneling	C—Construction Boards T—Timbers	Vehicle & Wagon Stock	C—Crating Stock B—Bending Stock	Appalachian White Pine	S—Appalachian Spruce H—Appalachian Hemlock	P—Southern Pine H—Hardwood Flooring	Other
Griffith Lbr. Co., Huntington, W. Va.	MW	7	AB	XB	C	ZH	SO	P	W					T	X	B		H	PH	0
Grissom-Rakestraw Lbr. Co., Burnside, Ky.	MW																			
J. P. Hamer Lbr. Co., Kenova, W. Va.	MW	5	AB	XB	C	ZH	SO	P	W	A				T		B				
Hardwood Corp. of America, Asheville, N. C.	MW	25	AB	XB	CY	ZH	SO	P	W	AK	FS	GI	TW	CT	X	CB	X	H	PH	67
Hart-Thompson Lbr. Co., Barbourville, Ky.	M	2	AB	X	Y	ZH	SO	PS	W	A					X	CB				82
Huntington Hardwood Co., Huntington, W. Va.	M	5	B		C	H	O	P	W											
Hutton & Bourbonnais Co., Hickory, N. C.	M	15					SO	P				I	TW			C	X	H	PH	
Inter-Mountain Coal & Lbr. Co., Elkins, W. Va.	M	5	AB	XB	C	ZH	SO	P	W											
Kitchen Lbr. Co., Ashland, Ky.	M		AB	X		ZH	S	P	W											1
Marshall Lbr. Co., Marion, N. C.	MW	15	AB	XB	CY	H	SO	P	W			G	T		X		X	H	H	82
McCracken & McCall Inc., Lexington 9, Ky.	MW	5	AB	X		H	SO	P	W	A			T	CT	X	C				4
McCulloch Lbr. Co., Atlanta, Ga.	W		AB	XB		H	SO	PS	W					C	X				H	0
Meadow River Lbr. Co., Rainelle, W. Va.	M	25	AB	XB	CY	ZH	SO	P		AK	FS	GI	T	T		B			H	6
Miller Bros. Co., Inc., Johnson City, Tenn.	M	25		XB		H	O	P	W		FS	GI	TW				X		H	6
T. W. Minton & Co., Barbourville, Ky.	MW	5	AB	X		ZH	SO	P	W	AK	S	I		T	X	B			H	7
Mountain Fork Lbr. Co., Inc., Bluefield, W. Va.	M																			
Mowbray & Robinson Lbr. Co., Cincinnati, O.	M		AB	XB	CY	ZH	SO	P	W	A				T	X	CB				
The Mower Lbr. Co., Charleston 28, W. Va.	MW	40	AB	XB	C	ZH	SO	P	W	K	S	G	T	T	X	C		SH	H	
Oakboro Lbr. Co., Inc., Lenoir, N. C.	M	10			Y		O	P									X	H	P	
P. W. Plumly Lbr. Corp., Winchester, Va.	MW		AB	XB	C	Z	SO	P	W	AK		I	TW	CT		CB	X		PH	
Poinsett Lbr. & Mfg. Co., Pickens, S. C.	MW	12	AB	XB	CY	Z	SO	PS	W	AK	FS	GI	TW	T	X	CB	X	H	P	6
W. M. Ritter Lbr. Co., Columbus, O.	M	50	AB	XB	CY	ZH	SO	P	W	AK			T	T	X	CB	X	H	P	9
D. M. Rose & Co., Knoxville 4, Tenn.	M	5	AB	X	CY	ZH	SO	P	W	AK	S	GI	T	T	X					
Schilling Lbr. Co., Parkersburg, W. Va.	MW		B	X	C	ZH	SO	PS	W	A				T	X	B				
Wm. C. Schreiber Lbr. Co., Chicago 16, Ill.	W		AB	XB	CY	ZH	SO	P	W	AK					X				PH	
Stearns Coal & Lbr. Co., Stearns, Ky.	M	15	AB	XB		H	SO	P		A							X	H	P	
Stuart Lbr. Corp., Stuart 10, Va.	M	10	A	XB			SO					I	TW						PH	6
Thompson Mahogany Co, Philadelphia 36, Pa.	M						O	P	W											TM
Veneer Lbr. & Plywood Co., Chicago	W		AB	XB	CY	H	SO	PS	W	K	S	GI	TW	CT	X					
Vestal Lbr. & Mfg. Co., Knoxville, Tenn.	M	40	AB	XB	CY	ZH	SO	PS	W	AK				CT		CB	X	H	PH	
Joe Virgeson Lbr. Co., Inc., Columbia, S. C.	W		AB	XB		ZH	SO	P	W	AK	FS	GI							PH	0
Walker Lbr. Co., McKinville, Tenn.	MW	5	AB	X	C	Z	SO	PS	W	A	S	I		CT	X					
Warner Lbr. Co., Asheville, N. C.	M		AB	XB	CY	H	SO	P	W								X	H		
Webster Hardwood Lbr. Co., Dixie, W. Va.	M	7	AB	XB	C	ZH	SO	P	W					CT				H		
West Virginia Lbr. Co., Elkin, W. Va.	MW	6	AB	XB	CY	ZH	SO	P		A				T		C		SH	H	
Williams-Brownell, Inc., Asheville, N. C.	MW	10	AB	XB	CY	ZH	SO	P	W	AK	FS	GI	TW	CT			X	H	H	67
Wistar, Underhill & Co., Philadelphia 2	W		AB	XB		H	SO	P					T				X		PH	
Wood-Mosaic Co., Inc., Louisville 9, Ky.	MW	20	AB	XB	C	ZH	SO	PS	W	A			W	T	X	CB			H	10
Wright-Bachman Lbr. Co., Inc., Forest City, N. C.	MW																			
J. Walter Wright Lbr. Co., Bristol, Tenn.	MW	15	AB	XB		ZH	SO	PS	W	A		G				C				
Zickgraf Hardwood Co., Franklin, N. C.	M	7	AB	XB	Y		O	P			FS	I	TW				X	H	PH	

3—Black Gum
4—Black Gum, Buckeye, Poplar Bevel Siding
5—Poplar Bevel Siding
6—Aromatic Red Cedar
7—Poplar Bevel Siding 1828, Factory Lumber, Furniture Squares, Broom Handles, Ladder Rungs, Wood Turnings
8—Hardwood Factory Lumber, Furniture Squares
9—Poplar Bevel Siding, Furniture Squares, Black Gum, Buckeye
10—Black Gum, Butternut, Aromatic Red Cedar, Veneers of Practically all species
Z—Butternut
TM—Furnish Veneers of practically all Species—Main Lumber Product Mahogany
O—Other Woods

Northern Hardwood, White Pine, Hemlock and Spruce Lumber and Specialties

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	W—Northern White Pine N—Norway Pine	H—Northern Hemlock S—Northern Spruce	A—Ash B—Basswood	B—Birch. X—Beech	X—Chestnut. C—Cherry	S—Soft Elm. R—Rock Elm	H—Hard Maple S—Soft Maple	Y—Yard & Shed Stock L—Lath	D—Dimension T—Timbers	S—Bevel Siding H—Hardwood Flooring	W—White Cedar Shingles L—Log Cabin Siding	F—Factory Lumber I—Industrial Cut Stock	A—Air Dried Rgh. Dimension K—K.D. Rgh. Dimension	F—Finished Dimension S—Semi-Fin. Dimension	G—Glued-up Dimension B—Bending Stock	H—Hardwood Timbers V—Veneer. P—Plywood	B—Construction Boards S—Box Shook. C—Crating	Other
Ahonen Lbr. Co., Ironwood, Mich.	MW	10	W	HS	AB	B		S	HS	Y	D	H			AK					K
Chas. H. Barnaby Lbr. Co., Greencastle, Ind.	M	5			AB	X	C	S	HS						A		B			O
Bay De Noquet Co., Chicago 4, Ill.	M	22	W	HS		XB			HS	YL	D			FI	AK	FS	G	HV		
Paul B. Berry, Grand Rapids 6, Mich.	W				AB	XB	XC	RS	HS						AK	FS	G	H	B	O
Boehm-Madisen Lbr. Co., Milwaukee 3, Wis.	M	20	W		AB	B		RS	HS			SH		FI	AK					
Wm. Bonifas Lbr. Co., Neenah, Wis.	M	20	W	HS	AB	B		S	HS			S		FI	AK	S			B	
Bowler Lbr. Co., Bowler, Wis.	MW	3	W	H	AB	XB	C	RS	HS	Y										3
W. R. Braund Co., Birmingham, Mich.	W					B									AK			VP		
Braund-Harman Co., 214 Wabeek Bldg., Birmingham, Mich.	W					B									A			V		BD
Cadillac-Soo Lbr. Co., Sault Ste. Marie, Mich.	M	15	W	HS	AB	XB		S	HS	YL	T			F				H		
C. M. Christiansen Co., Phelps, Wis.	MW	15	WN	HS	AB	B	C	S	HS	Y	DT	SH	L	FI	A	S	B	H	BS	O
Clark Dickerson Lbr. Co., Reed City, Mich.	MW		W	H	AB	XB		RS	HS											
Cleveland Cliffs Iron Co., Negaunee, Mich.																				WP
Connor Lbr. & Land Co., Marshfield, Wis.	M	50	W	HS	AB	B		RS	HS	YL	D	SH	WL	F	AK	FS	G	VP	C	★6
Copeland Lbr. Co., Chicago, Ill.	MW	42	W	H	AB	XB	C	S	HS	Y				F					C	△5
Fink Lbr. Co., Cable, Wis.	M		WN	H	AB	B		S	H	Y	DT	S		FI	A	F			BC	
Abbott Fox Lbr. Co., Iron Mountain, Mich.	M	16	W	H	AB	B		RS	HS	Y			L	F						
Fry-Fulton Lbr. Co., St. Louis 4, Mo.	W		W		B	B			HS						AK			VP		O
Gillies Bros., Braeside, Ont., Canada	M	30	WN	S						Y	D			F						
Goodman Lbr. Co., Goodman, Wis.	MW	18	W	HS	AB	XB		RS	HS	YL	D	S	L	FI	AK	FS	B	HV	SC	
Hawley Lumber Co., Ontonagon, Mich.	MW		W	H	AB	B		S	HS	Y			L		A				B	E
Holt Hardwood Co., Oconto, Wis.	W				B	XB			HS	Y		H								*K
Horner Flooring Co., Dollar Bay, Mich.	W				AB	B		S	HS	Y	D	H		FI	AK	FS	B	H	B	*K
Jauquet Lbr. Co., Newald, Wis.	M	4	W	H	AB	B		RS	HS					F	A				BC	
Knoke Lbr. Co., Appleton, Wis.	MW	4	W	H	AB	XB	C	RS	HS	Y	T			F					BC	4★
Knudson & Mercer Lbr. Co., Chicago 4	W		W	H						Y	DT									O
McCulloch Lbr. Co., Atlanta, Ga.	W		W		B	XB		S	HS			H								
Menominee Indian Mills, Neopit, Wis.	M	22	W	H	AB	XB		RS	HS	YL										O
Meunner Lbr. & Supply Co., Marathon, Wis.	MW	2	W	H	AB	B		RS	HS	Y										
Michigan Dimension Co., Manistique, Mich.	M														K	FS	G			
Michigan Pole & Tie Co., Newberry, Mich.	M	10	WN	HS		XB			HS		T	SH		F				H	BC	★
Michigan Maple Block Co., Petoskey, Mich.	MW	8	WN	HS	AB	XB		S	HS			S	WL	FI	AK	S			C	
Oshkosh Wood Products Corp., Oshkosh, Wis.	MW				B	B		RS	HS					FI	AK	FS	G			O
Frank Paxton Lbr. Co., Kansas City 3, Kas.	W				AB	XB	XC	S	HS			H		F				P		O
Rainy Lake Lbr. Co., Ltd., Chicago 2, Ill.	MW		WN	S						YL	D	S	L	F						
Robbins Flooring Co., Reed City, Mich.	M											H								
Roddis Plywood Corp., Marshfield, Wis.	MW	40	W	HS	AB	B		RS	HS	YL	T	SH	WL	F				VP	C	†
Schneider Bros. Lbr. Co., Marquette, Mich.	M			H	AB	XB		RS	HS	Y	D				AK					
Trout Creek Lbr. Co., Trout Creek, Mich.	M		WN							Y				F	AK					
Underwood Veneer Co., Bessemer, Mich.	M		W		AB	B		S	H	Y								VP		
Veneer Lbr. & Plywood Co., Chicago	W			S	AB	BX	XC	S	HS		DT				AK	FS	G	VP		
M. J. Wallrich Land & Lbr. Co., Shawano, Wis.	MW	2		H	AB	B		R	H											78
White River Timber Co., Bergland, Mich.	M		W	HS	AB	B		S	HS		DT								B	
Yawkey-Bissell Corp., White Lake, Wis.	M	10				B		RS	HS			H								

*—Graded Hardwood Sawdust
‡—Cedar Poles, Ties, Posts
□ Hardwood Squares
K—Custom Kiln Drying
BD—Birch Doors

†—Hdwd. Ven'nd Doors
△—Vehicle & Wagon Stock
E—Ties and Logs and Graded Hardwood Sawdust

O—Other Woods TL—Ties and Logs
3—Red Oak
WP—Wood Products to Customers' Pattern
4—Cottonwood, Hickory, Butternut

5—Red & White Oak, Yellow Poplar
6—Graded Hardwood Sawdust, Hardwood Squares
7—Milling in transit
8—Baled softwood shavings

Southern Hardwood Lumber, Specialties and Other Items

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	A—Ash B—Basswood	X—Beech. C—Cherry	Y—Cottonwood. E—Elm	G—Red & Sap Gum B—Black Gum	T—Tupelo H—Hickory	M—Magnolia S—Soft Maple	O—Red & White Oak P—Pecan	X—Poplar S—Sycamore	W—Walnut L—Willow	A—A.D. Rough Dimension K—K.D. Rough Dimension	F—Finished Dimension S—Semi-Finished Dimension	G—Glued-up Dimension I—Interior Trim & Mouldings	T—Thresholds, Treads, Risers W—Wall Paneling	C—Construction Boards T—Timbers	V—Vehicle & Wagon Stock C—Crating	P—Southern Pine C—Cypress	R—Red Cedar W—White Cedar	other
ALABAMA																					
S. B. Adams Lbr. Co., Inc., Box 345, Mobile	M	12	AB	X	YE	GB	TH	MS	O	XS	W					CT	VC	C			‡
Cathey Lumber Co., Montgomery	M	18	AB	X	YE	GB	TH	MS	OP	XS						CT		PS			‡
Clarke County Lbr. Mills, Birmingham	W		AB	X	YE	GB	T	MS	OP	XS		AK	S	GI	T	CT	C	P			
Fisher Bros. Lbr. Co., Inc., Tuscaloosa	M	9		X	E	GB	TH	S	OP							CT		PC			Δ
Hallett Mfg. Co., Inc., Mobile 2	M	8	A	X	YE	GB	TH	MS	OP	XS	L	AK	FS	I	TW	CT	VC	PC			‡
Miller & Co., Inc., Selma	M	50	AB	X	YE	GB	TH	MS	O	XS	W	A				CT	VC	PC			‡‡
Mobile River Sawmill Co., Inc., Mt. Vernon	M	20	A	X	YE	GB	TH	M	OP	XS		AK	FS			CT	VC	C			OF
Pine Plume Lbr. Co., Montgomery 1	MW	30	A			GB	TH	MS	O	XS						C	C	P			
T. B. Richardson Lbr. Co., Birmingham 3	W			X		GB	T	M	O	X		A	F	I	W	CT	C	P			OF*
Scotch Lbr. Co., Fulton	M	25	A	X	YE	G	TH	M	O	XS		AK	F			T	C	PC			OF
Smith Lbr. Co., Inc., Red Bay	M	25	A	X	E	GB	TH	S	O	XS		A	F			CT	C	PC	R		*
W. C. Smith Lbr. Co., Montgomery 3	W		B		YE	GB	TH	MS	O	XS	L	A				CT		P			
W. T. Smith Lbr. Co., Chapman	M	20	AB	XC	YE	GB	TH	MS	OP	XS	L				W	T	C	PC			*
Stutts Sawmill Co., Inc., Thomasville	M	18	AB	XC	YE	GB	TH	MS	OP	XS	WL	AK	FS			T	C	PC			
Vredenburg Saw Mill Co., Vredenburg	M	15	A		Y	GB	T	M	O	XS						T		PC			
J. W. Wells Lbr. Co., Montgomery 1	M	100	AB	X	YE	GB	TH	MS	OP	XS						CT		PC			†
Youngerman-Reynolds Lbr. Co., Montgomery	MW	40	A	X	YE	GB	T	MS	O	X		A	FS			CT	C	PC			
ARKANSAS																					
Anthony Bros. Wood Co., Urbana, P.O. Box 86A	M	40			Y	G			O			AK		I				P			
Arkansas Lbr. Co., Little Rock	W		AB	X	YE	GB	T		OP	S	L					CT	C	PC			
J. W. Black Lbr. Co., Corning	M	5	A		YE	GB	TH	S	O			AK	FS	I	TW	CT	V				‡
Bradley Lbr. Co., of Ark., Warren	M	50	A	X	E	GB	H		OP	S			S	GI	TW	T	C	PC			
Breece-White Mfg. Co., Eudora	M	8	A		YE	G		S	OP	S	L					T		C			
Crossett Lbr. Co., Crossett	M	48	A	X	E	GB			OP	S		AK		I	TW	CT	VC	PC			‡
Dacus Lbr. Co., West Memphis	M	8	A		YE	GB	TH	S	OP	S	L					T		C			
Fordyce Lbr. Co., Fordyce	M	24	AB	XC	E	GB	H		O	S		AK	FS	I	TW	CT	VC	PC			‡
Gurdon Lbr. Co., Gurdon	M	25	A		YE	GB	H		P	S						C	C	PC			
Industrial Lbr. Co., Little Rock	MW	30				GB	T		O			AK	FS	GI	TW						
Keystone Lbr. Co., Camden	M	14				GB			O							T		P			
McLean-Arkansas Lbr. Co., Little Rock	M	8	A		YE	GB	TH	S	OP	S	L	K				T		C			
Reynolds-Gammill Lbr. Co., El Dorado	M	12	A	X	E	GB	T		O							CT	C	PC			*
Carlton Smith Industries, Inc., Bearden	M												S	G							
Southern Lbr. Co., Warren	M	40		X		G	H		OP			K	F	GI	TW	CT	C	PC			
Sparkman Hardwood Lbr. Co., Sparkman	M	8	AB	X	E	GB			O	S						CT	C	C			RT
Townsend Lbr. Co., Inc., Stuttgart	M	14			YE	G			OP	S	L					T					
Wheeler Lbr. Co., Pine Bluff	M	7	A	X	YE	GB	T	S	O	S						T		C			
J. L. Williams & Sons, Sheridan	M	25	A		E	GB	TH	S	O	S			S	I	T	CT	VC	P			OF
DISTRICT OF COLUMBIA																					
Paul B. Kern Lbr. Co., Washington	W		AB	X		GB	T	S	O	X			F	I	TW			PC			

‡—Bending Stock
Δ—Poplar Aircraft Stock
BV—Box Veneers

*—Birch
•—Car Material
†—Veneer

RT—R.R. Ties, Mine Ties
®—2x4 & Wdr. B/L Gr. Dimension, Car Material, and Ties

1—4/4 K. D. Gum S2S
2—R. R. Ties, Mine Ties
OF—Oak Flooring

Southern Hardwood Lumber, Specialties and Other Items

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	A—Ash B—Basswood	X—Beech. C—Cherry	Y—Cottonwood. E—Elm	G—Red & Sap Gum B—Black Gum	T—Tupelo H—Hickory	M—Magnolia S—Soft Maple	O—Red & White Oak P—Pecan	X—Poplar S—Sycamore	W—Walnut L—Willow	A—A.D. Rough Dimension K—K.D. Rough Dimension	F—Finished Dimension S—Sem-Finished Dimension	G—Glued-up Dimension I—Interior Trim & Mouldings	T—Thresholds, Treads, Risers W—Wall Panelling	C—Construction Boards T—Timbers	V—Vehicle & Wagon Stock C—Crating	P—Southern Pine C—Cypress	R—Red Cedar W—White Cedar	Other
FLORIDA																				
Robert O. Foerster, Jacksonville	MW		A												W			PC	R	
Foley Lbr. & Export Corp., Jacksonville 1	MW	30	A			GB	T	MS	O	X		AK	FS			T	C	PC	RW	
Paterson-McInnis Lbr. Co., Gulf Hammock	M	25	AB	C	E	GB	T	MS	OP							T		PC	R	
St. Joe Lbr. & Export Co., Port St. Joe	M	24	A			GB	T	M		X						CT	C	PC	W	•
Thomas Lbr. & Mfg. Co., Quincy	M	8			E	G	T	M		X								I		
GEORGIA																				
Augusta Hardwood Co., Augusta	M	12	A		YE	GB	TH	MS	O	XS		AK						PC		
Chatsworth Lbr. Corp., Chatsworth	M	9							O	X						T	C	P		
Chattahoochee Valley Lbr. Co., La Grange	M	12	A			G			O	X			F			C	C	P		
Georgia-Pacific Plywood Co., Augusta	MW	250	AB	XC	YE	GB	TH	MS	OP	XS	WL	AK			W	CT	VC	PC	RW	Z
Jeffreys-McElrath Mfg. Co., Macon	M	45	A		Y	GB		S	O	XS								P		1
McCann Lbr. Co., Doctortown	M	12	A		E	G	T	MS	O	X		K				CT		PC		
McCulloch Lbr. Co., P. O. Box 771, Atlanta	W		AB	X	YE	GB	TH	MS	OP	XS	WL	AK		G	W	CT	VC	PC	R	M
Northcutt Lbr. Sales Corp., Sandersville	W		A	X	YE	GB	TH	MS	O	XS		AK				C	C	PC		
Reynolds Bros. Lbr. Co., Albany	M	12	A	X	YE	G	TH	MS	O	XS		AK	S	I	T	CT	VC	PC		Δ1
Reynolds & Manley Lbr. Co., Savannah	MW	30	A		E	GB	T	MS	O	X						T	C	PC		
Rush Lbr. Co., Hawkinsville	M	8	A		YE	GB	TH	MS	O	XS						C		PC		
J. W. Starr & Sons Lbr. Co., Atlanta	M	25				GB			O	X		A	F			T	VC	P		
Sullivan Lbr. Co., Preston	M	15	A	X	YE	GB	TH	MS	O											
Swainsboro Lbr. Co., Swainsboro	MW	12	A		YE	GB	HT	MS	O	XS								PC		
ILLINOIS																				
Graham Lbr. Co., Chicago 4	MW		B	XC	YE	GB	T	S	O	XS	W	AK	F			T	C	PC	R	12
Gen. J. Silbernagel, Chicago 9	W					GB	T		O									PC		
Veneer Lbr. & Plywood Co., Chicago	W		AB	BC	CE	G	T	MS	O	XS	WL	AK	S	GI	TW	T		C		
KANSAS																				
Frank Paxton Lbr. Co., Kansas City 3	W		AB	XC	YE	G	H	MS	OP	XS	WL				W		V	PC		2
KENTUCKY																				
Brown Lbr. Co., Louisville 8	W	24				GB	T	MS	O	X						CT	C	PC		
Gamble Bros. Inc., Louisville	M											K	FS	G		T	VC			
The Mengel Co., Louisville 1	M											AK	FS	G	W			C		D5
R. C. Owen Co., Hopkinsville	M	12	A	XC	YE	GB	H	S	O	XS	W	AK	FS	I	TW	T	V		R	
LOUISIANA																				
Davis Bros. Lbr. Co., Ltd., Ansley	M	9	A	X	E	GB	H		O											
Dixie Lbr. Co., New Orleans	W																			M
Frost Lbr. Industries, Shreveport	M	125	AB	X	YE	GB	TH	MS	OP	XS		K	S	I	TW	CT	VC	PC		6
Higgins, Inc., New Orleans	M	12	A			GB	T													4
Hillyer Deutsch Edwards Inc., Oakdale	M	50	AB	XC	YE	GB	TH	M	OP	S	L	AK	S	GI		T	VC	PC		
J. W. Jeffries Lbr. Co., Shreveport	M	8	AB	X	YE	GB	TH	MS	OP	S						CT		PC		•
Kellogg Lbr. Co., Inc., Monroe	M	9	AB	X	YE	GB	TH	MS	OP	XS	L					CT		C		•
King Lumber Industries, Inc., Baton Rouge	M	24	AB	XC	YE	GB	TH	MS	OP	XS	WL					CT	VC	PC		•
Louisiana Central Lbr. Co., Clarks	M	20	A	X	E	GB		M	OP	XS							V	PC		
F. C. Luthi & Co., New Orleans 12	W																			I
Mansfield Hardwood Lbr. Co., Shreveport	M	40	AB	XC	YE	GB	TH	M	OP	S		AK	S	GI	TW	CT	VC	PC		*3

Δ—Poplar Aircraft Stock
*—Car Material
12—Boxes, Box Shook, Plywood & Veneer
1—Boxes, Box Shook
2—Plywood & Veneer
3—Box Shook
I—Importers of Balsa, Mahogany and Other Tropical Woods
6—Car Material, Bending Stock, Treated Lumber
M—Mahogany Lumber & Logs & Birch Plywood
5—Hardwood Plywood and Mahogany Veneer
4—Mahogany and Spanish Cedar Lumber and Veneers
8—Buckeye, Butternut, Hackberry, Mahogany, Teak
D—Hollow and Solid Core Flush Doors

Southern Hardwood Lumber, Specialties and Other Items

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	A—Ash B—Basswood	X—Beech. C—Cherry	E—Elm. Y—Cottonwood	G—Red & Sap Gum B—Black Gum	T—Tupelo H—Hickory	M—Magnolia S—Soft Maple	O—Red and White Oak P—Pecan	X—Poplar S—Sycamore	W—Walnut L—Willow	A—A.D. Rough Dimension K—K.D. Rough Dimension	F—Finished Dimension S—Semi-Finished Dimension	G—Glued-up Dimension I—Interior Trim & Mouldings	T—Thresholds, Treads, Risers W—Wall Paneling	C—Construction Boards T—Timbers	V—Vehicle & Wagon Stock C—Crating	P—Southern Pine C—Cypress	R—Red Cedar W—White Cedar	Other
LOUISIANA—Continued																				
Roy O. Martin Lbr. Co., Alexandria	M	10	A	X	E	GB	TH	MS	OP	S	L				W	CT	C	PC		—
May Bros., Garden City	M	30	AB	XC	YE	GB	TH	MS	OP	XS	L					T	VC	PC		
Newellton Hardwood Co., Newellton	M	9	A		YE	G		S	OP	S	L					T		C		
W. A. Ransom Lbr. Co., Harahan	M	12	AB	XC	YE	GB	TH	MS	OP	XS	L					CT	V	C		*△
Schwing Lbr. & Shingle Co., Inc., Plaquemine	M	15			YE	G	T	S	OP	S	L			I		CT		C		EC
E. Sondheimer Co., Sondheimer	M	10	A		YE	G	TH	S	OP	S	L					T		C		
Thistlethwaite Lbr. Co., Opelousas	M	8	AB	X	YE	GB	TH	M	OP	S	L							C		
Turner Lbr. Co., Le Moyen	M	11	AB		YE	GB	T	S	OP	S	L					T		C		
Urania Lbr. Co., Ltd., Urania	M	18	A	X	E	GB	TH	M	OP	XS		A	S			CT	VC	PC		
Woodard-Walker-Bowen, Inc., Shreveport 94	W			X		GB			O								C	PC		
MARYLAND																				
Arthur V. Charshee & Son, Baltimore 18	W		A		Y	GB			O	X		AK			T			PC	R	
Taylor & Newcomb, Inc., Catonsville-Baltimore 28	W		A	X	YE	GB	T	S	O	X		AK						P		
MASSACHUSETTS																				
Atlantic Lbr. Co., Boston	M	50	AB	XC	YE	GB	TH	MS	OP	XS	WL					T	V	PC	R	#
MISSISSIPPI																				
Bailey Lbr. Co., Laurel	M	12	AB	X	YE	GB	TH	MS	O	XS		AK	S			CT	VC	PC		*#
Burdette-O'Leary Lbr. Corp., Meridian	MW	25				GB	TH		O	X						T		P		
Corinth Planing Mill Co., Corinth	MW	5				G			O	X		A						P		9
A. De Weese Lbr. Co., Philadelphia	M	20				GB	T		O	X		AK	FS			C		P		#9
D. L. Fair Lbr. Co., Louisville	M	30	B	X		G	H		OP	X		AK	FS	GI	T	CT	C	P		
Farris Lbr. Co., Morton	M	15	A	X	E	GB	T	M		XS		AK	FS	I		C	C	P		
Gooch Bros. Lbr. Co., Yazoo City	M	7	AB	X	YE	GB	H	S	O	XS						T		C		
Hall-Inzer Lbr. Co., Amory	M	5	A	X	YE	GB	T	S	OP	XS	WL					T		PC		*
Hall & Neely, New Albany	M	5	A	X	YE	GB	TH	S	O	XS	W					T		C		
Henderson-Molpus Co., Philadelphia	MW	6		X		GB	T		O	X		AK		I		CT	C	P		
Houston Bros., Vicksburg	M	10	AB	XC	YE	GB	TH	MS	OP	XS	WL	A	S			T	VC	PC		
J. M. Jones Lbr. Co., Natchez	MW	20	AB	XC	YE	GB	TH	MS	OP	XS	WL	AK	FS			CT	VC	PC		#
King Lumber Industries, Canton	M	18	A	X	E	GB	TH	MS	O	XS		AK	F	G		T	C	PC		
R. F. Learned & Son, Natchez	M	9	AB	X	YE	G		S	OP	XS	L					T				
McGraw-Curran Lbr. Co., Inc., Yazoo City	M	9	B	XC	YE	GB	TH	MS	OP	XS	L					T		C		
Phillips-Rhyne Lbr. Co., Inc., Brookhaven	MW		AB	X	YE	GB	TH	MS	OP	XS	L	AK	FS	GI	TW	CT	VC	PC		15
R. A. Vinton Lbr. Co., Greenwood	M	11	A	X	YE	GB	TH	S	OP	XS	L					T		C		
Wallin Lumber Co., Inc., Columbus	M					G			O			A						PC		
Wax Lbr. Co., Woodville	M	18	AB	XC	YE	GB	TH	MS	OP	XS	WL	A	F			CT	C	PC		
Williams & Voris Hardwood Co., Jackson	M	5	AB	XC	YE	GB	TH	MS	OP	XS						T		C		
W. W. Woody Lbr. Co., Keirn	M	5	A	X	YE	GB	TH	S	OP	XS	L					T		C		
MISSOURI																				
Canthook Lbr. Co., St. Louis 1	MW				YE	G		S	O	XS						CT		PC		
Dierks Lbr. & Coal Co., Kansas City 6	M	25	A		E	GB	TH		O	S		AK	S	GI	T	CT	C	PC		6
Exchange Sawmills Sales Co., Kansas City 6	W								OP									PC		
W. T. Ferguson Lbr. Co., St. Louis 1	MW	75	A	X	YE	GB	T	MS	O	XS	L	AK	S			CT	VC	PC		8
Fry-Fulton Lbr. Co., St. Louis 4	W		AB	XC	YE	GB	TH	MS	OP	XS	WL	AK					VC	C		70

2—Bending Stock
3—Car Material
EC—Egg Case Ends & Centers

6—Rgh. Bds., Finished Bds., Box Shook, Grain Doors
△—Poplar Aircraft Stock

O—Other Woods
4—Box Shook and Grain Doors
15—Stacking Sticks

8—Grain Doors
9—Crating Stock
?—Mahogany

Southern Hardwood Lumber, Specialties and Other Items

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	A—Ash B—Basswood	X—Beech. C—Cherry	E—Elm. Y—Cottonwood	G—Red & Sap Gum B—Black Gum	T—Tupelo H—Hickory	M—Magnolia S—Soft Maple	O—Red and Dhite Oak P—Pecan	X—Poplar S—Sycamore	W—Walnut L—Willow	A—A.D. Rough Dimension K—K.D. Rough Dimension	F—Finished Dimension S—Semi-Finished Dimension	G—Glued-up Dimension I—Interior Trim & Mouldings	T—Threshold, Treads, Risers W—Wall Paneling	C—Construction Boards T—Timbers	V—Vehicle & Wagon Stock C—Crating	P—Southern Pine C—Cypress	R—Red Cedar W—White Cedar	Other
MISSOURI—Continued																				
Gaines Hardwood Lbr. Co., St. Louis	MW		AB	XC	YE	GB	TH	MS	OP	XS	WL					T	V	C	R	*#
Gideon-Anderson Lbr. Co., Gideon	W	6		X	YE	GB	T	S		S							C	C		1
Hobac Veneer & Lbr. Co., Inc., Caruthersville	M	7	A		YE	G		S	OP	S						T		C		
M. E. Leming Lbr. Co., Cape Girardeau	M	4		X	YE	G	H	S	OP	XS	L					CT	C	C		4
Long-Bell Lbr. Co., Kansas City 6	MW		AB	X	E	GB	TH	S	O	XS			S	GI		CT	VC	PC		*
Midland Valley Lbr. Co., Clayton 5	MW	12	AB	XC	YE	GB	TH	MS	OP	XS	WL					CT	VC	PC	R	
Thomas & Proetz Lbr. Co., St. Louis	MW		A	XC	YE	GB	T	MS	OP	XS	WL			I		T	C	PC		
H. E. Webster Lbr. Co., Kansas City 6.	W		AB	X	YE	G	TH	MS	OP	XS	WL				T		C	PC	R	1
NORTH CAROLINA																				
L. N. Bagnal, P. O. Box 2896, Winston-Salem	W		AB	X	YE	GB	TH	MS	O	XS	L	AK	FS	G	W		C	PC		N
P. M. Barger Lbr. Co., Statesville	W		AB	XC	YE	GB	TH	MS	OP	XS	L						C	PC		
B. N. Beard Lbr. Co., Greensboro	W		AB	X	YE	GB	TH	MS	OP	XS	L		S			T	C	PC		#
C. K. Callaham & Sons Lbr. Co., Charlotte			A	X	YE	GB	TH	MS	O	XS	L					CT	VC	P		
J. E. Elrod Lbr. Co., Charlotte	MW				Y	GB		S	OP	X		AK	FS			CT	C	PC		
Gennett Lbr. Co., Asheville																				
Greene Bros. Lbr. Co., Inc., Elizabethtown	M	15				G	T	S	O	X		K		G				PC		
So. Atlantic Lbr. Co., Greensboro	MW						T		O	X						C	C	PC		
W. M. Storey Lbr. Co., Southern Pines	MW					GB	T		O	X		AK	F			CT	C	P		1
Triplett Lbr. Co., Inc., Lenoir	W	4	AB	X	YE	GB	TH	S	OP	XS	L	AK	F		T	CT	VC	PC		
PENNSYLVANIA																				
Southeastern Industries, Inc., Philadelphia 34	MW		A	X	YE	GB	TH	MS	OP	XS		A				CT	C	PC		
SOUTH CAROLINA																				
Argent Lbr. Co., Hardeeville	M	18	A			GB	T	S		X			S	I	W	C		PC		4
Caromiss Lumber Co., Summerville	W					G			O	X		AK						PC		
Coastal Lbr. Co., Lake City	M	7	A		YE	GB	T	S	O	XS						CT		PC		10
Holly Hill Lbr. Co., Holly Hill	M	17	A		YE	GB	T	S	O	XS		AK	FS	GI	TW	CT	C	PC		11
Korn Industries, Inc., Sumter	M	15	A		YE	GB	TH	S	OP	XS		AK	FS	GI	TW	CT	C	PC		14
O. F. League Lbr. Co., Greenville	W		AB	X	Y	GB	T		O	XS		AK				C	C	P		
Lightsey Bros., Miley	M	18	A		E	G	T	S	O	X						T		PC		
Santee River Hardwood Co., St. Stephen	M	12	A		YE	GB	TH	S	OP	XS								PC		10
Joe Virgeson Lbr. Co., Inc., Columbia	W		AB	XC	YE	GB	TH	MS	OP	XS	W	AK	FS	GI						
TENNESSEE																				
Anderson-Tully Co., Memphis 10	M	75	AB	XC	YE	GB	TH	MS	OP	XS	WL	AK	FS	G	T		VC	PC		12
C. P. Bodine Lbr. Co., Memphis	MW	7			YE	GB	T	S	OP	S						T		C		
A. M. Bowen Lbr. Co., Dyersburg	M	7	AB	X	YE	GB	TH	S	OP	XS	WL	AK	S			CT	C	C		11
E. L. Bruce Co., Memphis 1	M	100	AB	XC	YE	GB	TH	MS	OP	XS	WL	AK	FS	GI	T	T	VC	PC	R	#4
Farris Hardwood Lbr. Co., Nashville																				
Chapman & Dewey Lbr. Co., Memphis	M	18	A	X	YE	GB	TH	S	OP	XS	L			I	TW	CT	C	C		10
Frank A. Conkling Co., Memphis 3	MW	15	AB	X	YE	GB	TH	MS	OP	XS	L	AK	S	G		T	VC	C		12

*—Car Material
1—Boxes, Box Shook
N—Plywood, Veneer and All Hardwood Items for Furniture Trade

10—Cypress Siding
11—Poplar & Cypress Siding
12—Plywood & Veneer

#—Bending Stock
14—Gum Veneer, Flitches & Logs

4—All Items Hardwood Lumber for Furniture Trade

Southern Hardwood Lumber, Specialties and Other Items

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	A—Ash B—Basswood	X—Beech. C—Cherry	Y—Cottonwood. E—Elm	G—Red & Sap Gum B—Black Gum	T—Tupelo H—Hickory	M—Magnolia S—Soft Maple	O—Red & White Oak P—Pecan	X—Poplar S—Sycamore	W—Walnut L—Willow	A—A.D. Rough Dimension K—K.D. Rough Dimension	F—Finished Dimension S—Semi-Finished Dimension	G—Glued-up Dimension I—Interior Trim & Mouldings	T—Thresholds, Treads, Risers W—Wall Paneling	C—Construction Boards T—Timbers	V—Vehicle & Wagon Stock C—Crating	P—Southern Pine C—Cypress	R—Red Cedar W—White Cedar	Other
TENNESSEE—Continued																				
Fulton Band Mill Co., Inc., Memphis	M	7		X	YE	GB	T		O	XS						T		C		
Jackson Sawmill Co., Jackson	M	9	A	X	YE	GB	TH	S	O	XS	W					T	VC	C		#
Miller & Co., Jackson	M	4	A	XC	YE	GB	TH	S	O	XS	W					T	V	C	R	#
Miss.-Valley Lumber Co., Memphis	M	26	A	X	YE	GB	TH	MS	OP	XS	WL							C		14
Nickey Bros., Inc., Memphis 12	MW	20	AB	XC	YE	GB	TH	MS	OP	XS	WL	AK	FS	GI	TW	CT	V	C	R	HV
E. W. Pratt, Memphis	W		AB	X	YE	GB	T	MS	O	X		AK		I			V			#
Schaefer Lbr. Co., Inc., Jackson	MW			X		G			O	XS										
Shannon Bros. Lbr. Co., Memphis	M	14	A	X	YE	G	T	S	OP	S	L					T		C		
The Southern Star Lbr. Co., McKenzie	M	5	A	XC	E	GB	TH	S	O	XS	W									
James E. Stark Co., Memphis 10	M	12	AB	XC	YE	GB	TH	S	OP	XS	WL	K	FS	G		T	V	C		16
Thompson-Kats Lbr. Co., Memphis	W		A																	17
United Timber & Lbr. Co., Memphis	M	11	AB	XC	YE	GB	TH	MS	OP	XS	WL	A	S	I		CT	C	PC		18
Vestal Lbr. & Mfg. Co., Knoxville	M	40	AB	XC	YE	GB	TH	S	OP	XS	WL	AK				T	C	PC	R	#
Walker Lbr. Co., McMinnville	MW	5	AB	XC	E	B	H	S	O	X	W					T	V		R	#
Williams & Voris Lbr. Co., Chattanooga	M	8	AB	XC	YE	GB	TH	MS	O	XS	W						V		R	
Woods Lbr. Co., Inc., Memphis	MW	20	A	X	YE	GB	TH	MS	OP	XS	L					T		C		
TEXAS																				
Angelina Hardwood Sales Co., Lufkin	M	24	A		E	GB	TH	M	OP	S		AK	S	GI	TW	CT	VC	C		RT
W. T. Carter & Bro., Houston	M	8	AB	X	E	GB	H	M	O	S						CT	V	PC		*
Edens-Birch Lbr. Co., Corrigan	M	25	A	X	YE	GB		M	OP	S		AK	F		T	C	VC	PC		
J. S. Hunt Lbr. Co., Inc., Nacogdoches	M	12				GB						K	F			T		P		
Kirby Lbr. Corp., Houston 1	MW	20	A	X	E	GB	H	M	OP	S						T		PC		
Southern Pine Lbr. Co., Texarkana	M	20	AB	XC	YE	GB	TH	M	OP	S	W	K	FS	GI	TW	T	C	PC		*RT
E. A. Stewart Lbr. Co., Texarkana	M	37	A		YE	GB	TH		OP		WL	AK	FS	I	T	CT	V	C		*#
J. E. Stone Lbr. Co., Nacogdoches	M	12	A	X	E	GB	H	M	O	S	W			I	W	CT	VC	P		*
Temple Lbr. Co., Pineland	M	9	AB	X	E	GB	TH	MS	OP	S		AK	FS	GI	TW	CT	VC	PC		*
Texas Hardwood Mfg. Co., Dallas	MW											K	FS	G						
Texas Longleaf Lumber Co., Trinity	M	15	AB	X	YE	GB	H	MS	OP	S	WL	A				T	C	PC		
VIRGINIA																				
Camp Mfg. Co., Inc., Franklin	M	10	A	X	E	GB	T	S	O	XS				I			C	PC		19
Richmond Cedar Works, Norfolk	M	33	A		E	GB	T	S	O	X				I	W	CT	C	PC	W	19
Williams & McKeithan Lbr. Co., Lynchburg	MW	40	A	X		GB	TH	S	O	XS		A	F			CT	C			

Z—Bending Stock
10—Cypress Siding
HV—Hardwood Plywood and Veneers

15—Stacking Sticks BT—R. R. Ties, Mine Ties
16—K.D. Casket Shells, Completed Furniture & Parts, Show Cases

17—Ash Specialists
18—Hickory Dimension, Ski Billets
*—Car Material

Stacking Sticks
14—Gum Veneer Flitches & Logs
19—Cypress Siding—Also

Southern Pine, Cypress, Hardwoods, Specialties

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	Shortleaf Yellow Pine	Longleaf Yellow Pine	Cypress	Southern Hardwoods	Yard & Shed Stock	D—Dimension T—Timbers	L—Lath C—Cedar Closet Lining	Interior Trim & Mouldings	X—Pine Bev. Sd. D—Drop Sd. C—Cyp. Sd. P.—Poplar Sd.	Flooring X—Pine. C—Cypress	H—Hardwood Flooring C—Hardwood Constr. Boards	F—Factory Lumber I—Industrial Cut Stock	X—Box Shook & Crating C—Crating Only	K. D. Window & Door Frames	L—Log Cabin Siding K—Knotty Paneling	R—Roofers. B—Boards	C—Car Material T—Treated Stock	Other
ALABAMA																				
Allison Lbr. Co., Inc., Bellamy	M	16	X			X	X	DT		X		X	H		X					
Beatrice Lbr. Co., Beatrice	M	12	X			X	X	DT												
W. A. Belcher Lbr. Co., Birmingham	MW	15	X	X		X	X	DT	L	X	X	X	H		C					
W. E. Belcher Lbr. Sales Co., Centreville	MW	30	X	X		X	X	DT		X	X	X			X					
Hurtsboro Lbr. Co., Hurtsboro	M	25	X			X	X											BR		
Clarke County Lbr. Mills, Birmingham	W		X	X		X	X	DT		X	DP	X	HC	FI	X		K	BR	C	O
Dadeville Lumber Co., Inc., Dadeville	MW	8	X	X		X	X	DT		X	XP	X	C	F	C		K	B	C	O
F. M. Downing Lbr. Co., Gordo	MW	15	X			X	X	T			D									P
Foshee Lbr. Co., Box 544, Montgomery	M	12	X	X		X	X								C					
Grayson Lbr. Co., Birmingham	MW		X			X	X	DT			XD	X		FI	X			B	T	
Gulf Lbr. Co., Mobile	M	26	X	X			X	D			XD	X		FI				B	C	
Hallett Mfg. Co. Inc., Box 171, Mobile	M	8	X	X	X	X	X	DT	C	X	XD	XC	H	F	C	X	LK	BR	C	1
W. M. McGowin Lbr. Co., Pine Apple	M	12	X			X	X				D	X	C					B	C	
Miller & Co., Inc., Selma	M	50	X	X	X	X	X	DT		X	XD	X	H		C			B		1
T. R. Miller Mill Co., Inc., Brewton	M	25	X	X		X	X	DT	C	X	X	X		I	X			BR	CT	2
Nettles Lbr. Co., Land	M	18	X	X			X	DT			X	X	XD							
Pine Plume Lbr. Co., Montgomery	MW	40	X	X	X	X	X	D			XC	X	C	FI	XC			RB	C	
T. B. Richardson Lbr. Co., Birmingham 3	W		X	X		X	X	DT		X	XD	X	HC	F	C		K	BR	C	
Scotch Lbr. Co., Fulton	M	25	X	X	X	X	X	DT		X	XD	X	HC	FI	X			B	C	
Shepherd Lbr. Corp., Montgomery	M	35	X			X	X	D			X	X			C				C	
Sims Lumber Co., Selma	M	8	X	X		X	X	D		X										
Smith Lbr. Co., Inc., Red Bay	M	25	X		X	X	X	DT	C		XP	X	C	FI	X					
W. C. Smith Lbr. Co., Montgomery 3	W		X	X		X	X	DT	L			X	HC	I	X			BR	C	
W. T. Smith Lbr. Co., Chapman	M	50	X		X	X	X	DT		X	X	X	H	FI	X				C	
M. W. Smith Lbr. Co., Inc., Jackson	M	30	X	X		X	X	DT			X	X		I						
Stringfellow Lbr. Co., Birmingham	MW	25	X	X		X	X	DT	L	X	X	X	HC	FI	XC			BR	CT	
Summerville Bros. Lbr. Co., Alliceville	M	10	X			X		D							C			B		
J. W. Wells Lbr. Co., Montgomery	MW	100	X	X	X	X	X	DT						I						
Wood Lbr. Co., Birmingham	MW		X	X	X	X	X	DT	L	X	VC	X	HC	FI	XC	X	LK	BR	CT	O
ARKANSAS																				
Anthony Bros. Wood Co., Urbana, P.O. Box 66A	M	40	X			X	X	DT		X	D	X		F						
Arkansas Lbr. Co., Little Rock	W		X		X	X	X	DT		X	XD	X	CH	F	X	X	K	B	CT	
Bradley Lbr. Co. of Ark., Warren	M	50	X		X	X	X	D	C	X	XD	X	H	FI	X	X	K	RB		C
Cook Co., A. B., Malvern	M		X				X	D		X	X	X	H							
Crossett Lbr. Co., Crossett	M	60	X		X	X	X	DT	L	X	X	X	H	FI	X	X			T	
Fordyce Lbr. Co., Fordyce	M	40	X		X	X	X	DT	L	X	X	X	H	FI	X	X			T	
Gurdon Lumber Co., Gurdon	M	25	X		X	X	X				XD	X	HC	F	C					
Ozan Lbr. Co., Prescott	M	25	X				X	D		X	X	X		F	X					
M. H. Pierce Lbr. Co., Morrilton	M	30	X			X	X	DT			X	X							C	
Southern Lbr. Co., Warren	M	45	X		X	X	X	DT		X	X	X	H	FI	X		K			
Southern Pine Lbr. Co. (See Texas Listing)																				
J. L. Williams & Sons, Sheridan	M	5	X			X	X	DT			X							B		
Williams Mfg. Co., Sheridan	MW	25	X			X	X	T				X		FI						
DISTRICT OF COLUMBIA																				
Paul B. Kern Lbr. Co., Washington	W		X	X	X	X	X	D	C	X	X	X	H	I	C		K	BR		O

P—Posts O—Other Softwoods 1—Cypress and Poplar Siding 2—Pressure Treated Forest Products C—Cypress Siding

Southern Pine, Cypress, Hardwoods, Specialties

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	Shortleaf Yellow Pine	Longleaf Yellow Pine	Cypress	Southern Hardwoods	Yard & Shed Stock	D—Dimension T—Timbers	L—Lath C—Cedar Closet Lining	Interior Trim & Mouldings	X—Pine Bev. Sd. D—Drop Sd. C—Cyp. Sd. P—Poplar Sd.	Flooring X—Pine. C—Cypress	H—Hardwood Flooring C—Hardwood Constr. Boards	F—Factory Lumber I—Industrial Cut Stock	X—Box Shook & Crating C—Crating Only	K. D. Window & Door Frames	L—Log Cabin Siding K—Knotty Paneling	R—Roofers. B—Boards	C—Car Material T—Treated Stock	Other
FLORIDA																				
The Alger-Sullivan Lbr. Co., Century	M	25	X	X		X	X	DT		X	X	X		I				B	C	EM
Brooks-Scanlon Inc., Foley	M	100		X			X	DT		X	X	X		I					CT	EM
Cummer Sons Cypress Co., Jacksonville	M	15			X		X	DT		X	C	C		F	X		LK	B		S
Robt. O. Foerster Lbr. Co., Jacksonville	MW		X	X	X	X			C			X								
Foley Lbr. & Export Corp., Jacksonville 1	MW	50	X	X	X	X	X	DT	L	X	DC	XC	H	F			LK	B	CT	S
C. J. Jones Lbr. Co., Everglades	M	12		X	X			T			X	X		I	X				C	
Lee Tidewater Cypress Co., Perry	M	35			X		X	DT						FI	X					
Neal Lbr. & Mfg. Co., Blountstown	M	12	X	X			X	DT			D	X								
Putnam Lbr. & Export Co., Jacksonville	W		X	X	X	X	X	DT	L	X	X	X	H	FI	C	X		B	CT	
Thomas Lbr. & Mfg. Co., Quincy	M	12	X	X		X	X	D	L	X	X	X	H	X	X	X	X	B	C	
GEORGIA																				
Alexander Bros. Lbr. Co., Columbus	M	15	X			X	X	D												HC
Atlanta Oak Flooring Co., Atlanta	MW		X		X	X			C	X		X	H	FI			K	B	C	G
Augusta Hardwood Co., Augusta	M	20	X	X	X	X	X	DT		X	XP	X						BR		
Baldwin Lbr. Co., Cornelia	M		X	X			X			X	XD	X					K	RB		A
J. N. Bray Co., Valdosta	M	10	X	X			X	DT		X	D	X						R		
Campbell Coal Co., Box 1498, Atlanta 1	MW	10	X	X		X	X	DT		X	XD	X		FI	XC	X	K	B	C	
Chatsworth Lbr. Corp., Chatsworth	M	10	X			X	X	DT			XP	X		FI						N
Chattahoochee Valley Lbr. Co., La Grange	M	12	X			X	X													HC
Dolan Lbr. Co., Augusta	MW	40	X	X		X		T			D				X			BR		
Georgia-Pacific Plywood Co., Augusta	MW	250	X	X	X	X	X	DT		X	XD	X	H	FI	C		K	RB	CT	
Mose Gordon Lbr. Co., Commerce	M	30	X			X	X	DT			D	X							C	
Hancock Lbr. Co., Quitman	M	30	X	X		X	X	DT		X	X	X						B	C	
Jeffreys-McElrath Lbr. Co., Macon	M	45	X			X	X	DT		IT	X	X		F	X			R		
McCulloch Lbr. Co., P. O. Box 771, Atlanta	W		X	X	X	X	X	DT	C		XC	X	HC		C		K	BR		HC
Northcutt Lbr. Sales Corp., Sandersville	W		X	X	X	X	X	D												
Reynolds Bros. Lbr. Co., Albany	M	15	X		X	X		T		IT	X				X			R		
Reynolds & Manley Lbr. Co., Savannah	MW	30	X	X	X	X	X	DT			XC	X			C			BR	C	
J. W. Starr & Sons Lbr. Co., Atlanta	M	25	X	X		X		DT			X			FI	X		K	RB		
Sullivan Lbr. Co., Box 32, Preston	M	15	X			X	X				X	X			X					
ILLINOIS																				
Graham Lbr. Co., Chicago 4	W		X	X	X	X	X	DT		X	X	X	H	F	X				C	SH
Edward Hines Lbr. Co., Chicago 2	MW	200	X	X	X	X	X	DT		X	X	X	H	FI	C	X	K	BR	C	O
Edward J. Koza Co., Chicago 26	W		X	X			X	DT		X	XD	X						B		
Knudson & Mercer Lbr. Co., Chicago 4	W		X				X	DT		X	X			FI		X				
Veneer Lbr. & Plywood Co., Chicago	W			X	X						C	C								
Winter Bros. Lumber Products, Inc., Oak Park	W		X				X			X				I		X				
KANSAS																				
Frank Paxton Lbr. Co., Kansas City 3	W		X		X	X							H	F						SH
KENTUCKY																				
Brown Lbr. Co., Louisville	W	60	X	X	X	X	X	DT		X	D	X							CT	
Mengel Co., Louisville 1	M																			YG
McCracken & McCall, Inc., Lexington	MW	5									P		C							
Stearns Coal & Lbr. Co., Stearns	M	15	X			X	X	T												
LOUISIANA																				
J. A. Bentley Lbr. Co., Zimmerman	M	18		X				DT	L		X	X		F					C	
Clinton Band Mill, Inc., Clinton	M	6	X		X	X		DT	C		XD		H		C			BR	C	

N—Northern White Pine
HC—Hardwood Crating Stock
O—Other Softwoods
EM—End-matched Stock
S—Cypress Shingles
A—Appalachian White Pine Paneling
G—Glued-up Dimension
YG—Doors, Also Glued-up Dimension
SH—Other Softwoods and Hardwoods

Southern Pine, Cypress, Hardwoods, Specialties

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	Shortleaf Yellow Pine	Longleaf Yellow Pine	Cypress	Southern Hardwoods	Yard & Shed Stock	D—Dimension T—Timbers	L—Lath C—Cedar Closet Lining	Interior Trim & Mouldings	X—Pine Bev. Sd. D—Drop Sd. C—Cyp. Sd. P—Poplar Sd.	Flooring X—Pine, C—Cypress	H—Hardwood Flooring C—Hardwood Constr. Boards	F—Factory Lumber I—Industrial Cut Stock	X—Box Shook & Crating C—Crating Only	K. D. Window & Door Frames	L—Log Cabin Siding K—Knotty Paneling	R—Roofers. B—Boards	C—Car Material T—Treated Stock	Other
LOUISIANA—Continued																				
Colfax Lbr. & Creosoting Co., Inc., Colfax	M	10	X			X	X	DT			X	X	C						T	
Crowell Long Leaf Lbr. Co., Inc., Long Leaf	M		X	X			X	DT		X	X	X		I						
Davis Bros. Lbr. Co., Ansley	M	15	X			X		DT		X	X	X								
Frost Hardwood Floors Inc., Shreveport	M	40							C				H						T	
Frost Lbr. Industries, Shreveport	M	125	X		X	X	X	DT		X	XD	X	HC	FI	X		L	BR	CT	
H. D. Foote Lbr. Co., Inc., Alexandria	M	14	X	X			X	DT			X	X		FI				B	C	
La. Cypress Lbr. Co., Ponchatoula	M				X															
La. Long Leaf Lbr. Co., Fisher	M	25	X			X	X	D		X	D	X							C	
Mansfield Hardwood Lbr. Co., Shreveport	M	40	X		X	X	X	DT		X	X	X	C	FI	XC	X	K	RB	C	
Roy O. Martin Lbr. Co., Castor	M	10	X		X	X	X	DT				X								VL
Thomas Lbr. Co., Winnfield	M	20	X	X			X	DT		X	X	X							C	
Urania Lumber Co., Ltd., Urania	M	18	X	X	X	X	X	DT		X	X	X	C	F					C	
Woodard Walker Bowen, Inc., Shreveport	W		X		X	X	X	DT		X	X	X		I	X				C	
MARYLAND																				
Taylor & Newcomb, Inc., Catonsville-Baltimore 28	W		X	X		X	X	DT		X	X	X						BR		O
MASSACHUSETTS																				
Atlantic Lbr. Co., Boston	MW	50	X	X	X	X			C				H							
MISSISSIPPI																				
Belmont Lbr. Co., Charleston	M	12	X				X	T							C				C	
Burdette-O'Leary Lbr. Corp., Meridian	MW	25	X	X		X	X	DT	L					FI						
Central Lumber Co., Brookhaven	M	10	X			X	X	DT		X	X	X		I	C			B		
Corinth Planing Mill Co., Corinth	MW	15	X			X	X	D			XD	X			C			BR		2
Crosby Lbr. & Mfg. Co., Crosby	M		X			X	X	DT		X	X	X	H	FI	X				C	
Deemer Lbr. Co., Deemer	M	12	X			X	X	DT			X				X					
A. DeWeese Lbr. Co., Philadelphia	M	20	X			X	X	D			DP	X	C	FI				B	C	
D. L. Fair Lbr. Co., Louisville	M	30	X			X	X	DT	L	X	XP	X	H	FI	X	X	K	B		
Farris Lbr. Co., Morton	M	15	X			X	X	D		X	X	X	C		X	X				2★
C. L. Gray Lbr. Co., Meridian	M	12	X			X	X	DT			D	X	C					B		
J. M. Griffin & Sons, Inc., Newton	M	18	X			X	X	DT		X	XP	X	FC	FI	XC		K	B	C	3
Henderson-Molpus Co., Philadelphia	MW	20	X			X	X	DT		X	X	X	C	FI	X					
Houston Bros., Vicksburg	M	10	X		X	X	X	DT			PC	X			X					
J. M. Jones Lbr. Co., Natchez	MW	30	X		X	X	X	DT			X	X	HC	FI	C			BR	C	
King Lumber Industries, Canton	M		X		X	X	X	DT	L	X	X			FI	X				T	
C. E. Klumb Lbr. Co., Crystal Springs	W		X	X			X	DT			X	X	HC	FI	X			BR	C	
S. E. Lackey Lbr. Co., Forest	M	18	X			X	X	DT		X	XD	X	C	FI	XC			B		3
Phillips-Rhyne Lbr. Co., Brookhaven	MW	10	X	X	X	X		DT	LC	X	D	X	HC	FI	X	X		BR	C	P
Wallin Lbr. Co., Inc., Columbus	M		X		X	X	X	D		X	XD	X								
Wax Lbr. Co., Woodville	M	15	X		X	X		DT			D	X								
MISSOURI																				
Cathook Lbr. Co., St. Louis	MW		X		X	X								FI	X					
Dierks Lbr. & Coal Co., Kansas City	M	125	X		X	X	X	DT		X	X	X	HC	FI	X	X	LK	B	CT	VL
Exchange Sawmills Sales Co., Kansas City 6	W		X		X	X	X	DT		X	X	X	H	F	X				C	
W. T. Ferguson Lbr. Co., St. Louis 1	MW	75	X	X	X	X	X	DT	L		XC	X	HC	FI	X			BR	CT	1

★—Furniture Dimension Stock
O—Other Woods

VL—Veneer Logs
P—Plywood

MA—Mfrs. Agt.

2—Boxes and Box Shook
3—Poplar Siding

1—Red Cedar Siding and Shingles, Poles and Piling

Southern Pine, Cypress, Hardwoods, Specialties

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	Shortleaf Yellow Pine	Longleaf Yellow Pine	Cypress	Southern Hardwoods	Yard & Shed Stock	D—Dimension T—Timbers	L—Lath C—Cedar Closet Lining	Interior Trim and Mouldings	X—Pine Sdg. D—Drop Sdg. C—Cyp. Sdg. P—Poplar Sdg.	Flooring X—Pine. C—Cypress	H—Hardwood Flooring C—Hardwood Constr. Boards	F—Factory Lumber I—Industrial Cut Stock	X—Box Shook & Crating C—Crating only	K.D. Window & Door Frames	L—Log Cabin Siding K—Knotty Paneling	R—Roofers. B—Boards	C—Car Material T—Treated Stock	Other
MISSOURI—Continued																				
Fleishel Lbr. Co., St. Louis	MW	50	X	X	X	X	X	DT	L	X	XC	XC		FI	XC		LK		C	
Hill-Behan Lbr. Co., St. Louis	MW		X				X	D												
Long-Bell Lbr. Co., Kansas City 6	MW		X		X	X	X	DT	C	X	X	X	H	FI	C			BR	CT	
Midland Valley Lbr. Co., Clayton 5	MW	8	X		X	X		DT	C		XD		H		C			BR	C	4
H. E. Webster Lbr. Co., Kansas City 6	W		X	X	X	X	X	DT		X	X	X	H	FI						
NEW YORK																				
Atlantic Lbr. Co., Buffalo	MW	50	X	X	X	X			C											
Cotton & Hanlon, Odessa	MW	30	X			X	X	D				X	H	F				BR		1
NORTH CAROLINA																				
L. N. Bagnal, P. O. Box 2896, Winston-Salem	W		X	X	X	X	X	D		X	X	XC		FI	XC			R		O
P. M. Barger Lbr. Co., Statesville	W		X	X	X	X	X	DT	C	X	XC	X	H		C	X	K	BR		
Geo. C. Brown & Co., Greensboro	M								C											S
C. K. Callaham & Sons Lbr. Co., Inc., P. O. Bx. 1, Charlotte 1	MW		X	X	X	X	X	DT		X	X	X	H				K	R		
Carr Lbr. Co., Pisgah Forest	M	8							L				H							3
J. E. Elrod Lbr. Co., Charlotte	MW		X	X	X	X	X	DT	L	X	X	X	H	F	X				T	SD
Eureka Lbr. Co., Washington	M	15	X			X	X					X						BR		
Greene Bros. Lbr. Co., Inc., Elizabethtown	M	15	X		X	X	X					XC	H					BR		EM
Hutton & Bourbonnais Co., Hickory	M		X			A		DT		IT	X	X	H		XC			BR	C	
Jeffreys-Myers Mfg. Co., Inc., Oxford	M	30	X			X		DT			D	X			X			R		
Oakboro Lbr. Co., Inc., Lenoir	M	10	X			A	X	D			XD	X		I	X		K	R		SD
John C. Shepherd Lbr. Corp., Charlotte 1	W		X	X	X	X	X	DT		X	XC	X	HC	FI	X	.		B	CT	2
Sinclair Lumber Co., Inc., Laurinburg	M	15	X	X	X		X	DT		IT	X	X		FI				R		
South Atlantic Lbr. Co., Greensboro	MW	40	X		X	X								I	X			R		
W. M. Storey Lbr. Co., Southern Pines	MW		X			X	X	DT			XD	X		FI	X			BR		
Triplett Lbr. Co., Inc., Lenoir	W		X	X	X	X	X	DT		X	X	X	H	FI	X		K	BR	C	A
PENNSYLVANIA																				
Babcock Lbr. Co., Pittsburgh 19	MW	40	X	X	X	X	X	DT	C	X	C	X	HC	F	XC			BR	C	
Wistar, Underhill & Co., Philadelphia	W		X		X	X	X	DT		X	X	X	H	F	C			BR		
SOUTH CAROLINA																				
Argent Lbr. Co., Hardeeville	M	18	X	X	X	X	X			X	XC	X		I	X		LK	R	C	
Caromiss Lumber Co., Summerville	W		X		X	X	X					X	H							
Dargan Lbr. Mfg. Co., Conway	M		X				X			X		X						B		
G. F. League Lbr. Co., Greenville	W		X	X	X	X	X	DT		X		X		FI						
Lightsey Bros., Miley	M	18	X	X	X	X	X	DT		X	X	X	H					BR		EM
Mullins Lbr. Co., Inc., Mullins	M	18	X		X	X	X	DT		X	X	X	HC	FI	XC		LK	R		J
Santee River Hardwood Co., St. Stephen	M	12	X		X	X	X	T			XC								T	
Palmetto Lbr. Sales Co., Inc., Spartanburg	W		X			X	X	D						FI				BR		
Joe Virgeson Lbr. Co., Inc., Columbia	W		X		X	X	X	D	C	X	X	X		I						
TENNESSEE																				
Anderson Tully Co., Memphis 10	M		X		X	X					P		H	FI	X					PG
E. L. Bruce Co., Memphis 1	M	100	X		X	X	X	DT	C	X	XD	X	H	FI	C		L	BR	C	EM
Frank A. Conkling Co., Memphis 3	MW	15			X	X														P
Nickey Bros., Memphis 12	MW	20			X	X		D	C	X	XC		H							

EM—End Matched Y.P. Fig. & Sheathing SD—Sash & Door Cut Stock P—Plywood 1—Pine Mill, Mayo, Va. 2—Nosed Stepping and Finish
O—Other woods S—Specialist in Cedar J—Jambs A—Appalachian White Pine, Box Shook, R. R. Materials
3—Appalachian Hardwoods 4—Pine & Hardwood Cross and Switch Ties PG—Plywood & Glued-up Stock

Southern Pine, Cypress, Hardwoods, Specialties

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	Shortleaf Yellow Pine	Longleaf Yellow Pine	Cypress	Southern Hardwoods	Yard & Shed Stock	D—Dimension T—Timbers	L—Lath C—Cedar Closet Lining	Interior Trim & Mouldings	X—Pine Sdg. D—Drop Sdg. C—Cyp. Sdg. P—Poplar Sdg.	Flooring X—Pine. C—Cypress	H—Hardwood Flooring C—Hardwood Constr. Boards	F—Factory Lumber I—Industrial Cut Stock	X—Box Shook & Crating C—Crating only	K.D. Window & Door Frames	L—Log Cabin Siding K—Knotty Paneling	B—Boards R—Roofers	C—Car Material T—Treated Stock	Other
TENNESSEE—Continued																				
Riggs-Buttram Lbr. Co., Athens	M	12	X			X		DT										B		
D. M. Rose & Co., Knoxville	M								C	X	X			I		X				G
Shannon Bros. Lbr. Co., Memphis	M	14			X	X	X	T						F						
James E. Stark Co., Memphis 10	M	12			X	X	X	DT			C	C		FI						G
Vestal Lbr. & Mfg. Co., Knoxville	M	40	X	X	X	X	X	T				XC								
Woods Lbr. Co., Inc., Memphis	MW	20			X	X		T												
TEXAS																				
Angelina County Lbr. Co., Keltys	MW	40	X		X	X	X	DT	L	X	X	X		FI			LK	B	C	
Boettcher Lbr. Co. of Huntsville, Huntsville	MW	24	X				X	DT		IT	X	X							C	
W. T. Carter & Bro., Houston	M	60	X			X	X	DT		X	X	X			C					FJ
Edens-Birch Lbr. Co., Corrigan	M	25	X	X		X	X													
Haslam Lbr. Co., Haslam	M	12	X			X	X	DT		X	X	X	H		X					F
Kirby Lbr. Corp., Houston	MW	100	X		X	X	X	DT		X	X	X	H	I				B	C	
Southern Pine Lbr. Co., Texarkana	M	90	X		X	X	X	DT	L	X	X	X	H	I	X		LK	B	CT	GF
J. E. Stone Lbr. Co., Nacogdoches	M	30	X			X	X	DT		X	X	X			C				C	
T. O. Sutton & Sons, Chireno	M	10	X			X	X	DT			X	X						B		
Texas Creosoting Co., Orange								T											T	CL
Texas Longleaf Lumber Co., Trinity	M	50	X			X	X	DT		X	X	X		FI	X					EM
VIRGINIA																				
Barnes Lbr. Corp., Charlottesville	M	39	X			X		DT		X		X	H	I		X				
Boydton Mfg. Co., Boydton	M	12	X			X		DT					H		X					
Burruss Land & Lbr. Co., Lynchburg	MW	65	X			X	X	DT						F				BR	C	S
Camp Mfg. Co., Inc., Franklin	M	30	X		X	X	X			X	X	X	H		X			BR		
Colonial Pine Co., Inc., Petersburg	MW	5	X					D							X			BR		
Williams & McKeithan Lbr. Co., Lynchburg	MW	100	X	X		X	X	DT			X	X	C	F	X			BR		

F—Finish
J—Jambs
S—Shiplap
EM—End-Matched Y.P. Flg.
G—Glued-up Stock
P—Plywood
CL—Creosoted Lumber, Cross Arms, Piling, Poles, Ties.
D*—Distribution Yard

Ponderosa Pine, Sugar Pine, White Fir, Incense Cedar, Douglas Fir, Redwood

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	Ponderosa Pine	Sugar Pine	W—White Fir I—Incense Cedar	Douglas Fir (Inland) Redwood	Yard and Shed Stock	D—Dimension T—Timbers	L—Lath P—S.R. Pickets	Mouldings	S—Bevel Siding F—Flooring	Factory Lumber	I—Industrial Cut Stock G—Glued-Up Stock	Sash and Door Cut Stock	Box Shook and Crating	K. D. Window and Dr. Frames	Sash, Doors, Screens	C—Log Cabin Siding K—Knotty Paneling	Other
ARIZONA																			
Navajo Tribal Sawmill, Window Rock	M	12	X				X	DT				X							
Saginaw & Manistee Lbr. Co., Flagstaff	M	45	X				X	D				X			X				
Southwest Lbr. Mills, Inc., McNary	M	100	X			X	X	D		X	S	X	I		X			K	IT
CALIFORNIA																			
Angels Box & Lbr. Co., Angels Camp	M	12	X	X	WI	X	X	DT				X							

IT—Interior Trim

Ponderosa Pine, Sugar Pine, White Fir, Incense Cedar, Douglas Fir, Redwood

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	Ponderosa Pine	Sugar Pine	W—White Fir I—Incense Cedar	Douglas Fir	Redwood	Yard and Shed Stock	D—Dimension T—Timbers	L—Lath P—S.R. Pickets	Mouldings	S—Bevel Siding F—Flooring	Factory Lumber	I—Industrial Cut Stock G—Glued-Up Stock	Sash and Door Cut Stock	Box Shook and Crating	K. D. Window & Door Frames	Sash, Doors, Screens	C—Log Cabin Siding K—Knotty Paneling	Other
CALIFORNIA—Continued																				
Beaver Lbr. Sales Co., San Francisco	MW		X	X		X		X	DT		X	S	X	I		X			K	
Paul Bunyan Lbr. Co., Susanville	M	30	X		WI			X	D				X							
Byles-Jamison Lbr. Co., Box 1666, Fresno	M	15	X	X	W			X					X							
Caldor Lumber Co., Diamond Spring	M	30	X	X	WI	X		X	D				X			X				
Cal. Sugar & West. Pine Agcy., Inc., San Francisco	W		X	X	WI	X		X	D		X		X	I	X	X				
Clover Valley Lbr. Co., Loyalton	M	40	X		W	X		X	DT		X		X			X				RT
Crowley Lumber Co., Inc., Richfield	M	20	X	X							X		X			X				
Diamond Match Co., Chico	M	52	X	X	WI	X		X	DT		X	S	X	IG	X	X	X	X	K	
Hammond Lbr. Co., San Francisco 6	M	130					X	X	D		X	S								7
Hobbs-Wall Lbr. Co., San Francisco	W						X	X			X	S	X							
[2]Holmes Eureka Lbr. Co., San Francisco 4	M						X	X	DT		X	S	X							
Hughes Bros., Foresthill	M	10	X	X	WI	X		X	D			SF	X							
Indian Head Lbr. Co., Little Valley	M	16	X		WI			X					X							
Kent Lbr. Co., San Francisco 4	W		X	X	X	X		X	D		X		X		X				CK	B
Lassen Lbr. & Box Co., San Francisco	M	50	X		W			X			X		X			X				
Long-Bell Lbr. Co., Weed	M	100	X		W			X	D	L	X	S	X	IG	X	X	X	X	CK	OP
Michigan-California Lbr. Co., Camino	M	25	X	X	WI	X		X					X			X				PL
Mt. Shasta Pine Mfg. Co., Mt. Shasta	M	20	X	X	W	X		X	D				X			X				
McCloud River Lbr. Co. (See McCloud Lbr. Co., Minneapolis)																				
Mt. Whitney Lbr. Co., Box 2946, Los Angeles	M	25	X	X	WI			X	DT	L			X	I	X					
Northern Redwood Lbr. Co., Korbel	M	40				X	X	X	DT	L		SF	X							TS
Pacific Lbr. Co., 100 Bush St., San Francisco 4	M	160				X	X	X	D	L	X	SF	X	G						TS
Penberthy Lbr. Co., Los Angeles	W		X	X	X	X		X					X			X				IL
Pickering Lbr. Corp., Standard	M	75	X	X	WI			X	D		X	S	X	I	X	X			CK	
Pine Logging Co. of Calif., Box 1086, Fresno	MW	15	X	X	WI			X	D				X							
Quincy Lbr. Co., Inc., Quincy	M	35	X	X	W	X		X	D		X		X			X			K	PL
Redwood Manufacturers Co., Pittsburg	MW		X	X		X	X	X	DT		X	S								4
Redwood Sales Co., San Francisco 4	MW						X	X	DT	LP	X	SF	X						C	TS
Sacramento Box & Lbr. Co., Box 1282, Sacramento 6	MW	35	X	X	WI	X		X	D				X			X				
Scott Lbr. Co., Inc., Shasta County, Burney	M	48	X	X	WI	X		X	D				X							PL
Ralph L. Smith Lbr. Co., Anderson (Sales K. C., Mo.)	M	70	X	X	WI	X		X	D			S	X							
Ralph L. Smith Lbr. Co., Canby (Sales K. C., Mo.)	MW	60	X		W			X	D		X	S	X	I	X	X				P
E. J. Stanton & Son, Los Angeles 54	MW		X	X	W	X	X	X			X	SF	X						K	56
Stokes Lbr. Co., San Francisco 5	W		X	X	W	X	X	X	DT	L	X		X						K	
Tarter, Webster & Johnson, Inc., San Francisco	MW	25	X	X	WI	X		X	DT		X	S	X		X	X		X		PL
Ukiah Pine Lbr. Co., Potter Valley	M	20	X	X	W	X		X	DT		X		X						K	RT
Union Lbr. Co., Crocker Bldg., San Francisco 4	MW	100	X	X	W	X	X	X	DT			SF	X	I					C	#
Wallace Mill & Lbr. Co., Paramount	M						X	X				S	X						C	
Wendling-Nathan Co., San Francisco 11	W		X	X	WI	X	X	X	DT	L	X	SF	X	I	X				K	6
West Side Lbr. Co., Tuolumne	M	60	X	X	WI			X	D		X		X			X				PL
Winton Lbr. Sales Co., Sacramento (also Minneapolis)	MW	50	X	X	WI	X	X	X	D		X	S	X	I	X	X				IT
A. K. Wilson Lbr. Co., P.O. 150, Compton	MW	60	X	X		X	X	X	DT	P	X	SF	X	I		X			C	
Wulcbet Lbr. Co., Los Altos	W		X	X	W	X		X	D				X		X					PL
IDAHO																				
Atlas Tie Co., Coeur d'Alene	M	16	X		X	W	FL	X	DT											
Boise-Payette Lbr. Co. (See Weyerhaeuser, St. Paul)																				

P—Plywood
6—Red Cedar Shingles and Douglas Fir Plywood
W°—Wholesale Distr. Yd.

RT—Railroad Ties
PL—Pattern Lumber
TS—Tank Stock
OP—Other Woods and Plywood

RS—Redwood Shingles
4—Redwood and Cedar Shingles and Douglas Fir Plywood
t—R.R. Ties, Redwood Shingles, Tank stock

B—Boards
56—Philippine Mahogany
Red Cedar Shingles, Douglas Fir Plywood
7—Railroad Ties and Tank Stock
IL—Industrial Lumber
IT—Interior Trim

Ponderosa Pine, Sugar Pine, Idaho White Pine, White Fir, Engelmann Spruce, Fir and Larch

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	Ponderosa Pine	Sugar Pine	Idaho White Pine	W—White Fir E—Engelmann Spruce	F—Fir L—Larch	Yard & Shed Stock	D—Dimension T—Timbers	L—Lath P—SR Pickets	Mouldings	S—Bevel Siding F—Flooring	Factory Lumber	I—Industrial Stock G—Glued-up Stock	Sash & Door Cut Stock	Box Shook & Crating	K. D. Window & Door Frames	Sash, Doors & Screens	L—Log Cabin Siding K—Knotty Paneling	Other
IDAHO—Continued																				
Brown's Tie and Lbr. Co., McCall	M	19	X			WE	FL	X	DT			F	X						CK	
Hallack & Howard Lbr. Co., Winchester	M	25	X			W	FL	X	D	LP	X	F								
Hallack and Howard Lbr. Co., Cascade	M	25	X			E	FL	X	D	L	X	FS								
Kaniksu Forest Products, Inc., Priest River	M	18	X		X	E	FL	X	DT	L										RC
McFarland-Brown Lbr. Co., Sandpoint	M	15			X	E	FL	X	D			S							K	RC
Potlatch Forests, Inc. (See Weyerhaeuser, St. Paul)																				
Russell & Pugh Lbr. Co., Springston	M	18	X		X	W	FL	X	DT		X	SF	X	I						RC
St. Maries Lbr. Co., St. Maries	M	25	X		X	WE	FL	X	DT	L	X	SF	X						CK	RC
White Pine Lbr. Co., Orofino	M	18	X		X	W	FL	X	D			S							K	
ILLINOIS																				
Cook County Lbr. Co., Chicago 28	W		X	X		WE	FL	X	DT	LB		SF	X	I		X			CK	RC
Edward Hines Lbr. Co., Chicago 2	MW	200	X	X	X	WE	FL	X	DT	L	X	SF	X	I	X				CK	O
Inland Lbr. Co., Chicago 1	MW					E	F	X	D				X	I		X				
Knudson & Mercer Lbr. Co., Chicago 4	W		X	X	X		FL	X	DT	L	X	SF						X		O
Edward J. Koza Co., Chicago 26	W		X		X	WE	FL	X	D		X	S	X							
Metropolitan Lbr. Co., Chicago 24	MW		X	X	X	WE	FL	X	DT		X	S	X	IG		X			CK	O
Midwest Jobbers, Inc., Chicago 8	W		X								X						X	X		IP
Rinn-Scott Lbr. Co., Chicago 1	W		X	X				X	DT		X	SF	X	IG	X	X	X	X		P
Wm. C. Schreiber Lbr. Co., Chicago 16	W		X	X	X	E	FL	X	D				X						K	P
Geo. J. Silbernagel, Chicago 9	W		X	X	X	WE	FL	X	DT	LP	X	SF	X	IG	X	X	X	X	CK	O
Winter Bros Lumber Products, Inc., Oak Park	W		X				FL	X			X	F			X		X	X		
KANSAS																				
Frank Paxton Lbr. Co., Kansas City 3	W		X	X	X		F						X	I						P
MICHIGAN																				
Metropolitan Lbr. Co., Detroit	MW		X	X	X	WE	FL	X	DT		X	S	X	IG		X			CK	O
MINNESOTA																				
McCloud Lbr. Co., Minneapolis	M		X	X		W	F	X	D		X	S	X		X	X			CK	
Weyerhaeuser Sales Co., St. Paul 1	M		X	X	X	WE	FL	X	DT	LP	X	SF	X	IG	X	X	X		CK	RC
Winton Lbr. Sales Co., Minneapolis 2	MW	100	X	X		W	F	X	D	L	X	SF	X	I	X	X	X		CK	WWI
MISSOURI																				
W. T. Ferguson Lbr. Co., St. Louis 1	MW	75	X	X	X	WE		X	DT				X							
Long-Bell Lbr. Co., Kansas City 6	MW		X	X	X	W		X	D	L	X	SF	X	IG	X	X	X	X	CK	OP
Ralph L. Smith Lbr. Co., Kansas City	MW	130	X	X	X	E	FL	X	D		X		X	I	X	X				P
MONTANA																				
Anaconda Copper Mining Co., Bonner	M	100	X				FL	X	DT	L	X	SF	X	I		X			CK	
Kalispell Lbr. Co., Kalispell	MW	20	X			E	FL	X	DT		X	S								
J. Neils Lbr. Co., Libby	M	80	X		X	E	FL	X	DT	L	X	SF	X	I	X	X			CK	IT
F. H. Stoltze Land & Lbr. Co., Columbia Falls	M	21			X	E	FL	X	DT	L		SF							K	
NEVADA																				
H. S. Chisholm, Inc., Reno	W		X	X		W		X			X	S	X	IG	X					
NEW MEXICO																				
M. R. Prestridge Lbr. Co., Alamogordo	M	22	X				F	X	DT		X		X							
New Mexico Timber Co., Albuquerque	MW	75	X			WE	F	X	DT		X								CK	
OHIO																				
George N. Comfort Lbr. Co., Cleveland 14	W		X	X	X	WE	FL		DT	L	X	SF	X	I		X			CK	
Inter Lakes-Gulf Lbr. Co., Cleveland 15	W		X		X	E	FL	X	DT	L		SF		I		X				M

P—Plywood
WW—Western White Spruce
RC—Red Cedar
O—Other Softwoods & Hardwoods
I—Interior Trim
M—Myrtlewood

Ponderosa Pine, Sugar Pine, Idaho White Pine, White Fir, Engelmann Spruce, Fir and Larch

OREGON	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	Ponderosa Pine	Sugar Pine	Idaho White Pine	W—White Fir E—Engelmann Spruce	F—Fir L—Larch	Yard & Shed Stock	D—Dimension T—Timbers	L—Lath P—SR Pickets	Mouldings	S—Bevel Siding F—Flooring	Factory Lumber	I—Industrial Stock G—Glued-up Stock	Sash & Door Cut Stock	Box Shook & Crating	K. D. Window & Door Frames	Sash, Doors & Screens	C—Log Cabin Siding K—Knotty Paneling	Other
Alexander-Stewart Lbr. Co., Prineville	M	38	X				FL	X	D		X	S	X	I		X			CK	
Jos. A. Adair Lumber Co., Portland 4	W		X	X	X	WE	FL	X	DT	L	X	SF	X	I			X		K	IT
American Forest Products Corp., Lakeview	M	25	X			W		X	D		X	S	X	I	X	X			K	
Blue Mountain Mills, John Day	M	30	X				FL	X	D		X		X	I		X			K	
Brooks-Scanlon, Inc., Bend	M	100	X			W	F	X	DT	LP	X	S	X	I	X	X			K	
Collins Pondosa Lbr. Co., Pondosa	M	20	X			W	FL	X	D	L		S							CK	
Contact Lbr. Co., Portland 4	W		X	X	X	WE	FL	X	DT	L	X	SF	X	IG	X	X	X	X	CK	IT
Curtis Lumber Co., Portland 5	W		X		X	W	FL	X	D		X	SF	X							
The Robert Dollar Co., Glendale	M	30	X	X			F	X	DT	L		F	X						K	I
Firpine Products Co., P.O. Box 188, Oswego	W		X	X		WE	FL	X	DT		X	SF	X	IG	X	X	X	X	CK	IT
Fleishman Lbr. Co., Portland	MW		X	X	X	WE	FL	X	DT		X	SF	X	I	X					O
Gilchrist Timber Co., Gilchrist	M	40	X					X	D		X		X						K	
Goose Lake Box Co.—Sales by White Pine Lbr. Dist., Reno, Nev.	M	15	X					X			X		X			X				
Heppner Lbr. Co., Inc., Heppner	M	15	X					X	D		X	S	X						K	
Edward Hines Lbr. Co. (See Chicago Listing)																				
Klamath Basin Pine Mills Co., Box 1051, Klamath Falls	M	50	X	X		W	F	X	D	L	X	S	X			X				
Kinzua Pine Mills Co., Kinzua	MW	40	X				FL	X	D*	L	X	S		IG	X	X	X		CK	Y
Kogap Lbr. Industries, Medford	M	30	X	X	X	W	F	X	DT			SF	X						K	
Medford Corp., Medford	M	70	X	X		W	F	X	DT	L	X	SF	X	I					CK	
Geo. E. Miller Lbr. Co., Portland 4	MW		X	X	X	WE	FL	X	DT	L	X	SF	X	IG					K	
Modoc Lumber Co., Klamath Falls	M	25	X	X		WE		X	D				X							
A. Morrison Lbr. Co., Portland	MW		X					X	D		X	S	X						K	
Mt. Emily Lbr. Co., La Grande	M	50	X				FL	X	D		X	S	X	I	X	X			K	Y
Ochoco Lbr. Co., Prineville	M	35	X				FL	X	D		X	S	X							
Oregon Lbr. Co., Baker	M	35	X					X	D		X	SF		IG		X	X		K	IT
Oregon Trail Lbr. Co., The, Union	M	12	X				FL	X	D*				X							
Patrick Lbr. Co., Portland 5	W		X	X	X	WE	FL	X	DT		X	S	X	I	X	X			CK	
Pine Products Corp. (See Carl Soderberg Lbr., Spokane)																				
Ponderosa Lumber Sales, Redmond—See Metro Lbr., Chicago	M		X					X	D		X		X	I					CK	
R. L. Smith Lbr. Co., Klamath Falls (Sales K. C. Mo.)	MW		X					X	D		X	S	X	I	X	X				P
So. Ore. Sugar Pine Co., Medford and Tiller	M	40		X	X		F	X					X							
Spalding & Son, Inc., Grants Pass	M	12	X	X			F	X	DT				X							I
Timber Products Co., Medford	MW	45	X	X		W	F	X	DT		X	SF	X	CI		X			K	P
Tite Knot Pine Mill, Redmond	M	30	X					X	D		X		X						K	
Van Deinse Lbr. Sales Corp., P.O. Box Box 704, Eugene	MW	25	X	X	X	WE	FL	X	DT	L	X	SF	X	I					CK	
Warm Springs Lbr. Co., Warm Springs	M	35	X				FL	X	D		X	S	X						K	
PENNSYLVANIA																				
Babcock Lbr. Co., Pittsburgh 19	MW	40	X	X	X	WE	FL	X	DT		X	SF	X	G		X				
Wm. Schuette Co., 239 4th Ave., Pittsburgh	W		X	X	X	E	FL	X	DT		X	SF	X	IG		X	X	X	X	
Wistar, Underhill & Co., Philadelphia 2	W		X	X		W		X	DT			SF	X							
SOUTH DAKOTA																				
Warren-Lamb Lbr. Co., Rapid City	M	24	X					X	D		X	SF				X			CK	
TEXAS																				
The Medena Co., El Paso	MW		X					X			X		X			X				

I—Incense Cedar D*—Fir & Larch Only Y—Cut-to-Length Trim, Lawn & Porch Furniture ?—Linderman Jointed Stock RT—Railroad Ties IT—Interior Trim
P—Plywood O—Other Woods

Ponderosa Pine, Sugar Pine, Idaho White Pine, White Fir, Engelmann Spruce, Fir and Larch

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	Ponderosa Pine	Sugar Pine	Idaho White Pine	W—White Fir E—Engelmann Spruce	F—Fir L—Larch	Yard & Shed Stock	D—Dimension T—Timbers	L—Lath P—SR Pickets	Mouldings	S—Bevel Siding F—Flooring	Factory Lumber	I—Industrial Stock G—Glued-up Stock	Sash & Door Cut Stock	Box Shook & Crating	K. D. Window & Door Frames	Sash, Doors & Screens	C—Log Cabin Siding K—Knotty Paneling	Other
WASHINGTON																				
Biles-Coleman Lbr. Co., Omak	M	48	X				FL				X			IG		X	X		K	WT
Bockmier Lbr. Sales Co., Inc., Radio Cent. Bldg., Spokane	W		X		X	E	FL	X	DT	L			X							
Cascade Lbr. Co., Yakima	M	65	X			W	F	X	DT	L		S	X			X				
Chelan Box & Mfg. Co., Chelan	M	24	X				F	X	DT				X			X				
Deer Park Pine Industry, Inc., Deer Park	M	40	X		X		FL	X	DT		X	SF	X	I	X	X	X		K	IT
Diamond Match Co., Spokane	M	90	X		X	WE	FL	X	DT	L	X	SF	X						K	RC
Fred Draper Lbr. Co., Colville	M	12	X				FL	X	DT			SF	X							
J. G. Kennedy Lbr. Co., Seattle 1	MW		X	X	X	WE	FL	X	DT	LP	X	SF	X	I	X	X			CK	S
Long Lake Lbr. Co., Spokane	M	48	X		X	WE	FL	X	DT	L	X	S	X	I			X		K	WT
Mauk Seattle Lbr. Co., Seattle 1	MW		X	X	X		FL	X	DT	L	X	SF	X	I		X			CK	IT
J. Neils Lbr. Co., Klickitat	M	50	X				F	X	DT	L	X	SF	X	I	X	X			CK	
Nettleton Timber Co., Box 3305, Seattle 14	M				X			X												
Pack River Sales Co., P.O. Box 1290, Spokane	MW	60	X		X	WE	FL	X	D		X	SF	X	I	X	X	X		K	RC
Peshastin Lbr. & Box Co., Peshastin	M	22	X		X	W	F	X	DT	L	X	SF	X	I		X			K	1
Schmitten Lbr. Co., Cashmere	M	15	X			W	F	X	DT			S	X	I		X			K	
Carl E. Soderberg Lbr. Co., Spokane 8	MW	40	X	X	X	E	FL	X	D		X	SF	X	I		X			CK	IT
Twin Harbors Lbr. Co., Aberdeen	MW		X	X	X		FL	X	DT	LP	M	SF	X	I						O
Wales Lbr. Co., Spokane 8	MW		X	X	X	WE	FL	X	DT				X							RC
Western Pine Mfg. Co., Spokane 7	M	50	X				FL	X	D		X			IG		X	X	X		1
White Pine Sash Co., Spokane	M	15	X				FL	X	D					IG		X	X	Sc	K	WT
Wm. Zosel Lbr. Co., Oroville	M	6	X				FL	X	DT							X				
WISCONSIN																				
Metropolitan Lbr. Co., Milwaukee	MW		X	X	X	WE	FL	X	DT	L	X	S	X	IG	X	X			CK	O

1—Interior Trim, Furniture, Boxes & Specialty Items WT—Wrapped Interior Trim IT—Interior Trim RC—Red Cedar O—Other Woods S—2x4-8 Fir & Larch Studs

Douglas Fir, West Coast Hemlock, Sitka Spruce, Western Red Cedar

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	D—Douglas Fir H—West Coast Hemlock	S—Sitka Spruce C—Western Red Cedar	Y—Yard Stock S—Shed Stock	D—Dimension T—Timbers	S—Select Structural Grades L—Long Timbers	M—Mouldings F—Flooring	S—Bevel Siding L—Log Cabin Siding	R—Red Cedar Shingles L—Lath	G—Gutter P—Plywood	S—Sash F—Frames W—Window & Door Stock	S—Shop Lumber I—Industrial Cut Stock	R—Rough Clears G—Glued-up Stock	B—Boat & Ship Lumber C—Car Material	T—Turning Squares L—Ladder Stock	B—Box Shook & Crating T—Tank, Pipe and Silo Stock	P—Poles, Piling T—Treated Stock	A—Airplane Stock K—Knotty Panelling	Other
CALIFORNIA																				
Beaver Lumber Sales Co., San Francisco	MW	106	D		YS	DT	S	M		R		SW	SI	R	BC		BT		K	O
Benson Lbr. Co., San Diego 12	MW	22	DH	C	YS	DT	SL							R	B		B	P		
W. E. Cooper Whse. Lbr. Co., Los Angeles	W		DH	SC	YS	DT	SL	MF		R	P	S	S	R						O
Pope & Talbot, Inc., San Francisco 4	MW	284	DH		YS	DT							I					T		O
R. J. Stanton & Son, Los Angeles 54	MW		D											R						
Wendling-Nathan Co., San Francisco 11	W		DH	SC	YS	DT	SL	MF	S	RL	P		S	R		L		P	AK	O
ILLINOIS																				
Hill-Behan Lumber Co., Chicago 30	W		DH	SC	YS	DT	SL	MF	SL	RL										O
Edward J. Koza Co., Chicago 26	W		DH	SC	YS	DT	SL	MF	S	R										
Metropolitan Lbr. Co., Chicago 24	MW		DH	SC	YS	DT		MF												

O—Other Woods

Douglas Fir, West Coast Hemlock, Sitka Spruce, Western Red Cedar

ILLINOIS, Continued	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	D—Douglas Fir H—West Coast Hemlock	S—Sitka Spruce C—Western Red Cedar	Y—Yard Stock S—Shed Stock	D—Dimension T—Timbers	S—Select Structural Grades L—Long Timbers	M—Mouldings F—Flooring	S—Bevel Siding L—Log Cabin Siding	R—Red Cedar Shingles L—Lath	G—Gutter P—Plywood	S—Sash. F—Frames W—Window & Door Stock	S—Shop Lumber I—Industrial Cut Stock	R—Rough Cleers G—Glued-up Stock	B—Boat & Ship Lumber C—Car Material	T—Turning Squares L—Ladder Stock	B—Box Shook & Crating T—Tank, Pipe and Silo Stock	P—Poles, Piling T—Treated Stock	A—Airplane Stock K—Knotty Paneling	O—Other
Geo. J. Silbernagel, 8 So. Mich., Chicago 3	W		DH	SC	YS	DT	SL	MF	SL	RL	GP	SF	SI	RG		TL	BT		K	0
Veneer Lbr. & Plywood Co., Chicago	W		D	S			SL		S						B				K	
Winter Bros. Lumber Products, Inc., Oak Park	W		D	S	YS			M				SW	I							
KANSAS																				
Frank Paxton Lbr. Co., Kansas City	W		D	S							P		S							0
MICHIGAN																				
Metropolitan Lumber Co., Detroit	MW		DH	SC	YS	DT		MF												
MINNESOTA																				
Weyerhaeuser Sales Co., St. Paul 1	M		DH	SC	YS	DT	SL	MF	SL	R	GP	FW	SI	RG	BC		BT	T	K	
Winton Lbr. Sales Co., Minneapolis 2	MW	100	DH	C	YS	D		MF	SL	RL			S		B		B		K	0
MISSOURI																				
Canthook Lbr. Co., St. Louis 1	W		DH	S																
W. T. Ferguson Lbr. Co., St. Louis 1	MW	75	DH	SC	YS	DT	SL	F	S	RL			SI		C		B	PT		0
Long-Bell Lbr. Co., Kansas City 6	MW		DH	C	YS	DT	SL	MF	SL	RL	GP	SW	SI	RG	BC	TL	BT	PT	AK	DS
NEW YORK																				
J. Herbert Bate Co., New York	W		D		Y	DT	S			L										
OREGON																				
Jos. A. Adair Lbr. Co., Portland 4	W		DH	SC	YS	DT		MF	S	RL	G		S	R	B				K	0
Air-King Mfg. Corp., Tigard	M	25	D		Y	DT					G									P
Bridge Lbr. Co., Reedsport	M	22	D		Y	DT	S								C					
Carlton Mfg. Co., Carlton	M	24	DH		Y	DT														
Carnation Lbr. Co., Forest Grove	M	36	D		Y	DT	SL							R	BC					
Al Clements Lbr. Co., Eugene	MW		D		YS	DT		MF					I	R	C	L	T			0
Contact Lbr. Co., Portland 4	W		DH	SC	YS	DT	S	MF	SL	RL	P	FW	SI	RG			B		K	0
Corvallis Lbr. Co., Corvallis	M	25	DH	C	YS	DT	SL	MF	S	R	GD		S	R	BC	TL	T		A	
Curtis Lumber Co.	W		DH	SC	YS	DT		MF	S	R										
Dwyer Lumber Co., Portland 6	M	30	DH	C	YS	DT	SL	MF					S	R	BC	L	T			
Engle & Worth Lbr. Co., McMinnville	M	45	D	C		DT	SL						S	R	B	L	T		A	
Firpine Products Co., P.O. Box 188, Oswego	W		DH	SC	YS	DT	SL	MF				FW	SI	RG		L				
Fischer Lbr. Co., Marcola	M	30	D		YS	DT	SL	F					SI		C					
Fleishman Lbr. Co., Portland	MW		DH	SC	YS	DT	SL	MF	S		P		SI							0
Gardiner Lbr. Co., Gardiner	M	93	D		Y	DT	SL							R	B					
Glustina Bros. Lbr. Co., Eugene	M	33	DH	C	YS	DT	SL	MF		RL	GP	W	SI	R	BC	TL	T		AK	
Griswold Lbr. Co., Portland 4	MW	70	DH	C	YS	DT	S							R	C	T			A	
Edward Hines Lbr. Co., Westfir	M	60	DH		YS	DT	SL							R	BC		T			0
Independence Lbr. & Mfg. Co., Inc., Independence	M		D		Y	DT	S			L										
Jaymer Wholesale Lbr. Co., Hood River	M	27	DH	C	Y	DT	SL							R	C	TL	T	P		0
C. D. Johnson Lbr. Corp., Portland	M	150	DH	S	YS	DT	SL	M	SL		G		SI	R	BC	TL	BT		A	P
Kingsley Lbr. Co., Portland 9	M	36	DH		YS	DT	L							R		L	T			
Kogap Lbr. Industries, Medford	M	30	DH		Y	DT	S	MF					S	R	C				K	
Lausmann Lbr. Co., Medford	MW	30	DH		Y	DT	S						S	R	C				K	
L. H. L. Lumber Corp., Carlton	M	60	D		Y	DT	SL							R			T			
D. M. McClintock Lbr. Co., Portland 5	W		DH	SC	YS	DT		MF	S	R										
Medford Corp., Medford	M	70	D		YS	DT	S	MF	SL	L			SI	R	C	L	T		K	
Geo. E. Miller Lbr. Co., Portland 4	MW		DH	SC	YS	DT	S	MF	SL	RL			SI	R	C					0
Morrill & Sturgeon Lbr. Co., Portland-	W		DH	SC	YS	DT	SL	MF	S	RL	G	SW	SI	GR	BC	TL	BT	TP	AK	0

O—Other Woods N—Noble Fir DS—Doors & Screens P—Prefabricated Items

Douglas Fir, West Coast Hemlock, Sitka Spruce, Western Red Cedar

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	D—Douglas Fir H—West Coast Hemlock	S—Sitka Spruce C—Western Red Cedar	Y—Yard Stock S—Shed Stock	D—Dimension T—Timbers	S—Select Structural Grades L—Long Timbers	M—Mouldings F—Flooring	S—Bevel Siding L—Log Cabin Siding	R—Red Cedar Shingles L—Lath	G—Gutter P—Plywood	S—Sash, F—Frames W—Window & Door Stock	S—Shop Lumber I—Industrial Cut Stock	R—Rough Clears G—Glued-up Stock	B—Boat & Ship Lumber C—Car Material	T—Turning Squares L—Ladder Stock	B—Box Shook & Crating T—Tank, Pipe and Silo Stock	P—Poles, Piling T—Treated Stock	A—Airplane Stock K—Knotty Paneling	Other
OREGON—Continued																				
Oregon-American Lbr. Corp., Vernonia	M	100	DH		YS	DT	S	F	S				S	R	C					
Oregon-Pacific Lbr. Co., Portland	W		DH	SC	YS	DT	SL	MF						RG						
Patrick Lbr. Co., Portland 5	W		DH	SC	YS	DT	SL	MF	SL	L	G	W	SI	R	BC	TL	BT	PT	AK	PP
Portland Lbr. Mills, Portland 8	M	48	D		Y	DT	SL						S	R	BC		T			
Prouty Lbr. & Box Co., Warrenton	M	40	DH	SC	YS	DT		MF	S	L	G		SI	R	BC	TL	T		A	
Rogue Lbr. Sales Co., P. O. Box 707, Medford	MW		DH	SC	YS	D		MF	S											
Rosboro Lbr. Co., Springfield	M	50	DH	C	YS	DT	S	MF	SL		G		I	R	BC	L	T		A	O
Santiam Lbr. Co., Div., Lebanon	M	50	DH		Y	DT	S			L	P		I	R	BC		T			
Santiam Lbr. Co., Div., Sweet Home	M	60	DH		YS	DT	SL	MF		L	P		SI	R	BC	L	T			
Stimson Lbr. Co., Forest Grove	M	45	D		YS	DT	S						S	R	C		T		A	O
Sullivan Lbr. Co., Portland	W		DH	SC	YS	DT	SL	MF	SL	RL			SI	R	BC	TL	T	PT		
Swede Basin Lbr. Co., Grants Pass	M	20	D		Y	DT	S		S				S	R	C					
Trio Lumber Co., Eugene	W		DH		YS	DT		MF	S											
Van Deinse Lbr. Sales Corp., P.O. Box 704, Eugene	MW	25	DH	SC	YS	DT		MF	SL	RL	P	FW	S	R	C	L	T			O
Wauna Lbr. Co., Wauna	M	60	D		YS	DT	SL	MF			G		SI	R	BC	T	T	T	A	
West Oregon Lbr. Co., Portland 9	M	50	DH			D												T		
Williamette Natl. Lbr. Co., Foster	M	75	DH	C	YS	DT	SL	MF	S	R	GP		S	R	BC	TL	T		A	
Willamette Valley Lbr. Co., Dallas	M	80	DH	C	YS	DT	SL	MF	S	R	GP		SI	R	BC	TL	T		A	N
W. A. Woodard Lbr. Co., Cottage Grove	M	60	DH	C	YS	DT	S	MF				W	SI	R	C	TL	BT		A	X
WASHINGTON																				
Alexander Lbr. Co., Seattle 1	W		DH	SC	YS	DT	SL		S				SI							
Colonial Cedar Co., Inc., Seattle	M									R										CS
Columbia River Paper Mills, Vancouver	M	50	DH		YS	DT										L				
Davis Sales Agency, Mercer Island	W		DH	SC	YS	DT	S		S	R			S							
Defiance Lbr. Co., Tacoma	M	65	D		YS	DT	SL			L			S	R	BC	L			A	
Dubois Lbr. Co., Inc., Vancouver	M	15	D		Y	DT	SL								C					
Duncan Lbr. Co., Inc., Seattle 11	W		DH	SC	YS	DT	SL	MF	S	R				R						
Eclipse Lbr. Co., Inc., Everett	M	45	DH	C	YS	DT	S	MF			G		SI	R	BC	L	T			
Gram Mfg. Co., Vancouver			DH	S				M	S				SI	R		L				
Gray Lbr. & Shingle Co., Seattle	MW	15	DH	SC	YS	DT	SL	MF	S	R				R	BC	L	T	P		
Robt. Gray Cedar Lbr. Co., Inc., Hoquiam	M		DH	SC	YS	D		MF		R										
Heidner & Co., Tacoma 1	MW		DH	SC	YS	DT	SL	MF	S	RL	P	W	SI	RG	BC	TL	BT	DT	A	
Wm. Hulbert Mill Co., Everett	M	33		C	YS			M	SL	R	G			R	B	T				Z
International Timber Products, Inc., Seattle 1	W		DH	SC	YS	D	S	MF	S				S	R						
Karlen-Davis Co., Tacoma 1	MW		DH	C	YS	DT	SL	F	S				SI	RG	BC	TL				
J. G. Kennedy Lbr. Co., Seattle 1	MW		DH	SC	YS	DT	SL	MF	SL	RL	GP		SI	R	BC	L	BT	PT	K	O
Long-Bell Lumber Co., Longview	MW	460	DH	C	YS	DT	SL	MF	SL	RL	GP	SW	SI	RG	BC	TL	T	PT	A	2
R. C. Miller Cedar Lbr. Co., Aberdeen	M	15		C	YS	DT		MF	SL	RL	G		S				T		K	
Mauk Seattle Lbr. Co., Seattle 1	MW		DH	SC	YS	DT	SL	MF	SL	RL	P	SW	SI	R	BC	TL	BT		K	O
Morrison Mill Co., Anacortes	M		DH	SC	YS	DT	SL	F					SI	R		TL	B		AK	
North-Robbins Plywood, Inc., Seattle 9	W		DH	SC	YS	DT					P		SI							
Pacific National Lumber Co., Tacoma	W		DH	SC	YS	DT	SL	MF	S		GP	SF	SI	R	BC	TL	BT			OW

N—Noble Fir
PP—Ponderosa Pine
W—Window and Door Stock

1—Soft Maple A.D. Dim. & Const. Bds.
□—Prefabrication and Processing

Z—Glued-Up Dimension, Linderman Stock
2—Frames, Doors & Screens

O—Other Woods
CS—Cedar Shakes and Stained Shingles.
X—Kiln Dried Fir Plank and Small Timbers, No. 3 to Sel. Structural

Douglas Fir, West Coast Hemlock, Sitka Spruce, Western Red Cedar

	M—Manufacturer W—Wholesaler	Annual Capacity Million Feet	D—Douglas Fir H—West Coast Hemlock	S—Sitka Spruce C—Western Red Cedar	Y—Yard Stock S—Shed Stock	D—Dimension T—Timbers	S—Select Structural Grades L—Long Timbers	M—Mouldings F—Flooring	S—Bevel Siding L—Log Cabin Siding	R—Red Cedar Shingles L—Lath	G—Gutter P—Plywood	S—Sash F—Frames W—Window & Door Stock	S—Shop Lumber I—Industrial Cut Stock	R—Rough Clears G—Glued-up Stock	B—Boat & Ship Lumber C—Car Material	T—Turning Squares L—Ladder Stock	B—Box Shook & Crating T—Tank, Pipe and Silo Stock	P—Poles, Piling T—Treated Stock	A—Airplane Stock K—Knotty Paneling	o—Other
WASHINGTON—Continued																				
Robinson Plywood & Timber Co., Everett	M	75	D		YS	DT	S	M			GP	SW	SI	R	BC	TL	T		A	★
St. Paul & Tacoma Lbr. Co., Tacoma 2	M	100	DH	C	YS	DT	S	MF	SL		GP		I		BC		T			
Seattle Cedar Lbr. Mfg. Co., Seattle 7	M	45		C	YS			M	S	R				R	B		T		K	
Simpson Logging Co., Seattle 1	M	80	DH		YS	DT	S				P			R	C					★
Stimson Mill Co., Seattle 7	MW	50	DH	C	YS	DT	S	F		L			S							
Tacoma Export Lbr. Co., Tacoma 1	M		D	C	Y	DT	S							R	B					
Twin Harbors Lbr. Co., Aberdeen	MW		DH	SC	YS	DT	SL	M	S	RL			SI		BC		T			O
Walton Lbr. Co., Everett	M	45	DH	SC	YS	DT	S	MF	SL		GP	W	SI	R	BC	L	T		A	N
Washington Mfg. Co., Tacoma	M		D					M			G	F		G						U
Washington Veneer Corp., Olympia	M	20	DH	C	Y	DT	S			L	P		S	R	B					
West Waterway Lbr. Co., Seattle 14	M	30	DH	SC	Y	DT									C					
Weyerhaeuser Sales Co., (See St. Paul, Minn.)																				
Wheeler, Osgood Co., The, Tacoma 1	M		D								P									1
WISCONSIN																				
Metropolitan Lbr. Co., Milwaukee	MW		DH	SC	YS	DT		MF												
BRITISH COLUMBIA																				
British Columbia Forest Prods. Ltd., Hammond	M	40		C	S			MF	S	R										
Canadian Forest Products, Ltd., Vancouver	M	120	DH	C	YS	DT	SL	MF	SL	R	P		SI	R	BC	L				
Canadian Western Lbr. Co., Ltd., Fraser Mills	M	200	DH	SC	YS	DT	SL	MF	SL	RL	GP	W		R	BC	L	T		K	★OU
Goodwin Johnson, Ltd., Vancouver	MW		DH	C	Y													P		
Robertson & Hackett Sawmill Co., Vancouver	M	35	DH	C	YS	DT	SL	MF	SL	R		W	SI	R	C	L			K	
Thurston Lbr. Co., Vancouver	M		DH	SC	YS	DT	S	MF	S	R										
Flavelle Cedar Limited, Port Moody	M	30		C					S	RL										
The David Wilson Lbr. Co., Lac la Hache	M		D	C	YS	D		MF	S											

o—Other Softwoods
E—Glued-up Dimension, Linderman Stock

U—Cl. Fir Finish, Porch, Stairs, Hand Rails; Built-Up Columns

X—Doors, Sash, Special Woodwork
N—Noble Fir

★—Doors, Windows, Sash
1—Complete Line House & Garage Doors

Hardwood Flooring and Other Items

	Oak	Maple	Beech	Birch	Gum	Pecan	Strip	Plank	Herringbone	Block	Factory Finished	Treated Flg. & Lumber	Pine Lumber	So. Hardwoods	Appal. Hardwoods	North. Hardwoods	Hardwood Trim	Cypress Trim	Pine Trim	Pine Flooring
Anderson-Tully Co., Memphis, Tenn.	X		X			X	X	X					X	X						X
Arkansas Oak Flooring Co., Pine Bluff, Ark.	X		X			X	X	X	X				X	X			X		X	X
Atlanta Oak Flooring Co., Atlanta, Ga.	X	X	X	X			X	X				X		X	X	X	X	X	X	
The Atlantic Lbr. Co., 80 Broad St., Boston, Mass.	X						X								X					
Babcock Lbr. Co., Pittsburgh 19	X	X	X	X			X				X		X	X	X	X			X	X
P. M. Barger Lbr. Co., Statesville, N. C.	X	X			X		X						X	X	X	X		X	X	X
Barnes Lbr. Corp., Charlottesville, Va.	X				X		X		X					X			X	X	X	X
Boydton Mfg. Co., Boydton, Va.	X						X													

Hardwood Flooring and Other Items

	Oak	Maple	Beech	Birch	Gum	Pecan	Strip	Plank	Herringbone	Block	Factory Finished	Treated Flg. & Lumber	Pine Lumber	So. Hardwoods	Appal. Hardwoods	North. Hardwoods	Hardwood Trim	Cypress Trim	Pine Trim	Pine Flooring
Bradley Lbr. Co., Warren, Ark.	X		X			X	X	X		X	X		X	X			X	X	X	X
E. L. Bruce Co., Memphis, Tenn.	X		X			X	X	X		X	X	X	X	X			X		X	X
Caromiss Lumber Co., Summerville, S. C.	X						X						X	X						
Carpenter Oak Flooring Co., Birmingham, Ala.	X						X										X		X	
Carr Lbr. Co., Pisgah Forest, N. C.	X	X					X								X					
Central Oak Products Co., Nashville, Tenn.	X	X	X				X	X						X	X					
Chapman & Dewey Lbr. Co., Memphis, Tenn.	X						X							X			X			
Clarke County Lbr. Mills, Birmingham, Ala.	X	X	X	X	X	X	X				X		X	X		X	X		X	X
Cloud Oak Flooring Co., Springfield, Mo.	X						X	X		X			X	X			X			
Colonial Hardwood Flooring Co., Inc., Hagerstown, Md.	X	X	X				X		X				X		X		X		X	X
Connor Lbr. and Land Co., Marshfield, Wis.	X	X		X			X		X	X		X	X			X				
A. B. Cook Co., Malvern, Ark.	X				X		X						X	X			X	X		
F. C. Cook & Co., Baltimore, Md.	X	X	X				X		X						X					
Cotton & Hanlon, Odessa, N.Y.	X	X	X	X	X		X	X					X	X	X	X			X	X
The Cromar Co., Williamsport, Pa.	X	X					X		X	X	X						X			
Crossett Lbr. Co., Crossett, Ark.	X						X					X	X	X					X	X
De Soto Hardwood Flooring Co., Memphis, Tenn.	X						X	X						X			X			
Dierks Lbr. & Coal Co., Kansas City 6, Mo.	X					X	X					X	X	X			X		X	X
Evans Hardwood Flooring Co., St. Louis, Mo.	X	X	X				X	X	X	X										
Exchange Sawmills Sales Co., Kansas City 6, Mo.	X					X							X	X					X	X
D. L. Fair Lbr. Co., Louisville, Miss.	X		X		X	X	X	X	X	X	X		X	X			X		X	X
M. B. Farrin Lbr. Co., Cincinnati, O.	X	X	X				X	X	X	X					X					
W. T. Ferguson Lbr. Co., St. Louis 1, Mo.	X	X			X		X				X	X	X	X					X	X
Fordyce Lbr. Co., Fordyce, Ark.	X		X			X	X					X	X	X			X	X	X	X
Frost Lbr. Industries, Shreveport, La.	X		X		X	X	X	X				X	X	X			X		X	X
Frost Lbr. Industries Inc., Shreveport, La.	X		X		X	X	X	X				X	X	X			X	X	X	X
Georgia-Pacific Plywd. Co., Augusta, Ga.	X	X	X	X	X	X	X	X		X	X	X	X	X	X			X	X	X
Gurdon Lbr. Co., Gurdon, Ark.	X						X						X	X					X	X
Hallett Mfg. Co., Mobile 2, Ala.	X				X	X	★						X	X			X	X	X	X
Harris Mfg. Co., Johnson City, Tenn.	X	X	X				X	X	X	X										
Higgins, Inc., New Orleans, La.	X				X					X	X									
Holt Hardwood Co., Oconto, Wisc.	X	X	X	X			X	X	X	X		X				X				
Horner Flooring Co., Dollar Bay, Mich.		X		X			X	X								X	X			
Hurtsboro Oak Flg. Co., Inc., Hurtsboro, Ala.	X						X			X			X	X					X	X
Industrial Lbr. Co., Little Rock, Ark.	X						X							X			X			
Kirby Lbr. Corp., Houston 1, Tex.	X						X						X	X					X	X
A. H. Leathers Mfg. Co., Dickson, Tenn.	X		X				X													
Lightsey Bros., Miley, So. Car.	X	X			X		X						X	X					X	X
Long-Bell Lbr. Co., Kansas City 6, Mo.	X						X	X					X	X			X		X	X
Marsh Lbr. Co., Inc., Dover, Ohio	X	X	X				X	X								X	X		X	
McMinnville Mfg. Co., McMinnville, Tenn.	X	X	X				X	X							X		X			
Meadow River Lbr. Co., Rainelle, W. Va.	X	X	X	X		X	X	X	X						X		X			
Memphis Hardwood Flooring Co., Memphis, Tenn.	X		X			X	X	X	X	X	X			X			X			
Merit Oak Flooring Co., Birmingham 1, Ala.	X		X				X													
Miller & Co., Inc., Selma, Ala.	X		X			X							X	X						X
Miller Bros. Co., Inc., Johnson City, Tenn.	X	X	X	X			X	X	X	X					X		X			
Mobile River Saw Mill Co., Inc., Mt. Vernon, Ala.	X		X			X	X							X						
Monterey Hardwood Flooring Co., Monterey, Tenn.	X	X	X				X													
Mower Lbr. Co., Charleston, W. Va	X	X	X	X			X						X		X		X			
Nickey Bros., Inc., Memphis, Tenn.	X		X	X		X	X	X		X				X	X	X	X	X		

★—Plain End

Hardwood Flooring and Other Items

	Oak	Maple	Beech	Birch	Gum	Pecan	Strip	Plank	Herringbone	Block	Factory Finished	Treated Flg. & Lumber	Pine Lumber	So. Hardwoods	Appal. Hardwoods	North. Hardwoods	Hardwood Trim	Cypress Trim	Pine Trim	Pine Flooring
North Branch Flooring Co., Chicago	X	X					X	X		X	X									
R. C. Owen Co., Hopkinsville, Ky.	X	X	X		X	X	X	X						X			X			
Ozark Oak Flooring Co., Bismarck, Mo.	X						X													
Frank Paxton Lbr. Co., Kansas City, Kans.		X	X	X			X	X		X	X			X	X	X				
Phillips-Rhyne Lbr. Co., Brookhaven, Miss.	X	X	X	X		X		X			X		X	X			X			X
Robbins Flooring Co., Reed City, Mich.	X	X	X	X			X		•	X										
Wm. C. Schreiber Lbr. Co., Chicago 16, Ill.	X	X		X			X						X	X	X	X				
Scotch Lbr. Co., Fulton, Ala.	X		X		X	X	X						X	X					X	X
Scottdale Wood Products, Inc., Scottdale, Pa.	X	X					X	X	X						X		X			
Geo. J. Silbernagel, 8 So. Michigan, Chicago 3	X	X	X	X			X						X	X					X	X
Southern Lbr. Co., Warren, Ark.	X		X		X	X	X				X		X	X			X		X	X
Southern Pine Lbr. Co., Texarkana, Tex.	X		X			X	X					X	X	X			X	X	X	X
E. A. Stewart Lbr. Co., Texarkana, Tex.	X						X							X						
Stowers Lbr. & Mfg. Co., Harriman, Tenn.	X						X													
Stuart Lbr. Corp., Stuart 10, Va.	X	X	X				X			X			X	X	X		X		X	
Texoak Flooring Co., Crockett, Texas	X		X		X	X	X			X				X			X			
Urania Lbr. Ltd., Urania, La.	X						X						X	X			X		X	X
Veach-May-Wilson, Inc., Alcoa, Tenn.	X						X							X						
Veneer Lbr. & Plywood Co., Chicago	X	X	X	X	X					X				X	X	X	X	X		
Virginia Oak Flooring Co., Pulaski, Va.	X	X	X	X			X	X	X	X			X[1]		X		X			
H. E. Webster Lbr. Co., Kansas City 6, Mo.	X	X	X			X	X	X			X		X	X			X			
J. W. Wells Lbr. Co., Menominee, Mich.	X	X					X		X	X						X	X			
Williams & Voris Lbr. Co., Chattanooga, Tenn.	X	X	X				X							X	X					
Wood-Mosaic Co., Inc., Louisville 9, Ky.	X	X	X	X			X	X			X			X	X					
Yawkey-Bissell Hardwood Fly Co., Whitelake, Wisc.	X	X		X			X	X		X										

*—Parquet

1—White Pine Only

Classified Advertising

All ads for classified section must be in Publisher's office 10 days preceding date of publication. Advertisements are set in uniform 6 point style. No cuts or special borders allowed. Please indicate classification desired. Publisher reserves right to classify, edit or reject any classified advertisement. No agency commission or cash discount allowed.

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BUILDING PRODUCTS MERCHANDISER
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HELP WANTED

WANTED: Capable young man for sales position in retail lumber and building materials yard located in Flint, Michigan. Excellent opportunity for right man. Address Box V-24, American Lumberman, Inc.

Wanted: For permanent position an experienced or partly experienced estimator and counterman for work in City Retail Lumber and Mason Supply Yard. Please state age, qualifications, availability and salary expected. Address Box W-21, American Lumberman, Inc.

Hardwood Inspector
Expanding hardwood operation needs inspector well acquainted with National Hardwood Lumber Association rules. Wisconsin location. Send experience, age, references and compensation expected in first letter. Address Box W-22, American Lumberman, Inc.

Opportunity for energetic man to represent large manufacturer of stock Millwork in well established territory calling on distributors. Must be willing to produce volume and should have knowledge of stock Millwork. Give full history and qualifications. Address Box W-42, American Lumberman, Inc.

Salesman Wanted, Philadelphia territory; also upper New York State; by well established New York wholesalers handling West Coast woods, largely Fir, Hemlock, Red Cedar; rail and water. Must have experience, contacts. Good opportunity. Commission or profit sharing basis. Address Box W-41, American Lumberman, Inc.

HELP WANTED

Materials and Home Improvement salesman to locate in South Bend, Indiana. Construction experience necessary. Salary and commission basis. Co-operative insurance plan. Write to Box W-31, American Lumberman, Inc.

Estimator—Biller
Familiar with residential millwork. Must be experienced in take off, pricing or billing. See or write:
Mr. Dodds, Edward Hines Lumber Co.
2431 S. Wolcott Ave.
Chicago 8, Illinois
CLiffside 4-6600

Wanted—Manager for retail yard in good Central Illinois Town of 1000. Please state qualifications, age and salary expected. Address Box W-33, American Lumberman, Inc.

MILL SUPERINTENDENT
Experienced, detailer and biller, energetic, good expediter, able to handle men, for long established modern custom woodworking plant in connection with retail lumber yard.
CARTER-LEE LUMBER CO.
Indianapolis 7, Indiana

WANTED
EXECUTIVE SECRETARY for local building material association. Prefer man with either association or lumber and building material experience. Excellent opportunity for right man. Please state age, qualifications, experience, availability and salary expected. Address Box W-44, American Lumberman, Inc.